NUMBER 17 · SEPTEMBER 1961

NATIONAL INSTITUTE ECONOMIC REVIEW

This is a two-monthly review.
Every January the Review presents a full-length general survey of the economic situation.
Other issues contain a short general survey followed by special articles on topical economic problems and studies of underlying trends.

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SUMMARY

The economic situation

In the six months before the Chancellor's measures in July, national output was rising at an annual rate of 3-4 per cent ; this rise was mainly explained by increasing production of plant, machinery and vehicles. The balance of payments was already improving in the second quarter ; this was not so much because exports increased (they have changed very little this year) but because imports fell, largely as a result of reduced stock-building.

Even apart from the Chancellor's measures, it seemed that fixed investment was levelling out and might fall next year ; further, since wage rates from January onwards have been rising fairly slowly and prices have been rising fairly fast, the increase in consumers' expenditure has slowed down. The Chancellor's measures are likely to reinforce both tendencies ; in particular, they may halt the rise in consumers' expenditure for a while. The measures may lengthen the process of wage negotiations ; but the eventual wage increases of the next round are likely to be enough to start consumers' expenditure rising again. By the second quarter of 1962, national output may be 1-1½ per cent higher than a year earlier (around 3 per cent higher than two years earlier).

Exports—if ships are excluded—did not rise in August ; but they should be a little higher in the second half of the year than in the first. In 1962, they should rise further. There will be favourable market opportunities in the United States. German competition should be less intense, because of revaluation and because some inflation is developing in Germany. The prospects in primary producers' markets should be somewhat better. Imports will probably remain much the same for some months, but could start rising slowly if output goes up again in the early part of next year. By then, the balance of payments might again be in overall surplus (on current and long-term capital account).

Prospects for the British car industry

A forecast of home demand is made in this article in terms of consumers' demand for the services provided by the ' stock ' of cars: this concept allows for the changing age and size distribution of the cars in use. The best explanation of the changes in car stock from 1948 to 1960 seems to be that the stock of cars rose about 2½ times as fast as real disposable income and that in addition there was an annual time-trend, independent of income, of 3 per cent a year. Out of a fairly wide range of possibilities, the ' central assumptions ' of the forecast are that real disposable income per head continues to rise at 2½ per cent a year ; that the stock of cars continues to rise nearly 2½ times as fast as income ; that the time-trend continues at 3 per cent a year up to 1965, and then slows down ; and that between 1965 and 1970 there is a rise in the rate of replacement. On these assumptions, demand for new cars in Britain would be around 1.0-1.2 million a year in 1965 and 1.6-1.8 million in 1970. If Britain joins the Common Market, a substantial increase in British imports of cars can be expected.

The estimates of export demand, depending as they do on the whole trend of world demand and trade, can be little more than illustrations of what might happen in certain plausible circumstances. Using various degrees of elaboration in forecasting, it is suggested that the annual rate of rise in the number of cars in use may be 3 per cent in North America, 12-13 per cent in Western Europe, 20 per cent in Japan, and 10 per cent in the rest of the world. The share of this demand met by imports seems likely to rise in Western Europe—with growing intra-trade ; elsewhere it will probably fall from its 1960 figure. Britain's share in these imports, it is assumed, will continue to fall in the sterling area ; will recover from the very low current level in North America ; and will rise in Western Europe, assuming that Britain joins the Common Market. On these assumptions, export demand would be around 650-700 thousand in 1965 and around 1.1 million in 1970.

On these various assumptions, the total demand for the output of the British car industry would be around 1.6 million in 1965 and 2.4 million in 1970. Set against the British industry's expansion plans, this would imply that the industry as a whole would be working at about 70 per cent of maximum capacity between now and 1965—perhaps rather lower than this at times in the middle of the period. By 1970, on these forecasts, the slack should be taken up and the industry would be working near maximum capacity, if there were no further expansion. In Continental Western Europe, on the other hand, a comparison of demand and capacity forecasts implies fairly full capacity working in 1965. If the British industry becomes more competitive, British exports might be higher and imports lower and these projected differences in capacity utilisation might well not appear.

THE ECONOMIC SITUATION

During the first half of 1961, real output and expenditure were rising at a rate of about 3-4 per cent per annum and in the absence of the Chancellor's restrictive measures in July, much the same rate of expansion would have been likely to continue through the rest of the year. It now seems that the growth of demand and output will slow down and probably level out for a time. The balance of payments continues in overall deficit, but was improving considerably before the Chancellor's measures were announced. The reason was a decline in imports, which has been sharper than we expected in earlier issues of the Review. The rate of exports has barely changed since the end of 1960. In the next twelve months conditions in export markets should be favourable and even though Britain's competitive position remains weak, there should be a rise in exports. Since a check to growth at home is likely to prevent imports from rising much, the overall balance may again show a surplus in the first half of 1962, for the first time since 1958.

The surplus might reach considerable proportions if there were a spate of disinvestment in stocks. That however would be only a temporary benefit. It cannot yet be said that any progress has been made in the problem of reconciling long-term expansion in Britain with a satisfactory balance of payments. One possible encouraging sign for Britain is that in Germany revaluation may be having some effect on the balance of payments and that internal wage-costs have recently risen more rapidly than they have done in Britain.

EXPORTS AND THE WORLD ECONOMY

Exports

In May-July total exports were a little over ½ per cent higher than in the preceding three months and nearly 2 per cent higher than the rate in October-January. (Comparison of these periods eliminates most of the effects of dock strikes.) In August they rose by another 6 per cent. These rises were due almost entirely to a surge of deliveries of ships and aircraft. Other exports have changed very little since the beginning of the year (table 1).

The trend of exports to particular market areas is also disturbed by the erratic movement of exports of ships and aircraft, which are particularly 'lumpy' items ; in particular, the reversal in August of the recent downward trend in exports to the overseas sterling area was due to very big deliveries of ships to Bermuda, India and New Zealand. From February-April to May-July, other exports to the overseas sterling area fell by 6½ per cent with Australia accounting for about half the total drop ; in August they fell by a further 6 per cent. Exports to Canada changed little, but those to the United States rose—as was to be expected in view of the sharp rise in United States economic activity (discussed below). Exports to both Western and Eastern Europe were also expanding relatively fast.

There have been no large changes since February-April in any of the main commodity groups of exports, other than ships and aircraft. Fuel and metal exports rose a little, and there was a slight fall in exports of

Table 1. United Kingdom exports

£ million, seasonally adjusted

	1960			1960–1961 Oct.-Jan.[a]	1961		
	I	II	III		Feb.-April	May-July	Aug.[b]
By area (excl. ships and aircraft)							
North America	158	133	118	120	108	113	123
Western Europe	250	248	249	265	272	287	297
Eastern Europe	19	22	20	17	25	27	33
Overseas sterling area	343	342	351	355	357	334	314
Latin America	36	36	38	40	40	40	37
Other countries	79	69	69	78	77	71	72
Total (excluding ships and aircraft)	**885**	**854**	**846**	**875**	**880**	**878**	**873**
Ships and aircraft (all areas)	30	31	24	28	34	41	99
Total exports	**915**	**885**	**870**	**903**	**914**	**919**	**972**

Source : Board of Trade.

(a) Four months at three-monthly rate.
(b) At three-monthly rate.

textiles and ' other manufactures '. Exports of road vehicles were again lower ; the downward trend for cars probably eased off, but exports of commercial vehicles stopped rising. The recent rise in machinery exports also stopped. These checks were probably associated with falling imports into the overseas sterling area, which take a high proportion of commercial vehicles and machinery.

World economic prospects

The world economic situation in the rest of 1961 and the first half of 1962 should be more favourable to Britain's exports. A marked recovery is taking place in the United States and even though the general rate of expansion in Western Europe appears to be slowing down, Britain's export prospects are reasonably favourable. Prospects for sales of manufactures to primary producing countries are improving.

Industrial countries

In the *United States*, gross national product rose in the second quarter of 1961, for the first time for a year. Half the substantial rise was accounted for by the resumption of stock-building, but even without this, national expenditure would have risen 2 per cent (table 2). Consumers' expenditure went up, the rise being divided equally between durable goods and services. Private fixed investment continued to rise, largely because of increased expenditure on housing. Government purchases of goods and services rose more slowly than in the first quarter of the year but at a faster rate than during the last three quarters of 1960.

Unemployment in July remained at its peak of 6.9 per cent (seasonally adjusted) ; it has now been above 6 per cent for ten months. Industrial production has virtually regained its pre-recession level, having risen by 11 per cent (seasonally adjusted) between the February trough and August. The rate of increase has fallen every month since April and industrial production seems likely to grow more slowly in the second half of this year.

The seasonally adjusted current surplus of the United States balance of payments deteriorated in the second quarter as a result of a sharp drop in exports and a slight rise in imports (table 3). There was, however, an improvement on capital account, mainly due to lower special debt repayments. Consequently the overall balance improved. Indeed, in the second quarter the current surplus was larger than the net capital outflow (including short-term capital) for the first time since 1957.

In July, exports of goods and services turned up again, but there was a much larger increase in imports and the current balance continued to deteriorate. Some further reduction is likely during the rest of 1961 : exports are unlikely to be as buoyant as in 1960, in view of the slower expansion in Western Europe (including Britain), while imports will probably continue to rise as domestic expenditure expands.

Table 2. United States : changes in the gross national product

$ billion, current prices, annual rates, seasonally adjusted

	1960			1961	
		Change over previous quarters			
	I	III	IV	I	II
Private consumption	323.3	− 0.7	+ 2.4	− 1.6	+ 5.4
Durable goods	*44.2*	*− 1.8*	*+ 0.5*	*− 4.4*	*+ 2.6*
Non-durable goods	*150.5*	*− 0.8*	*+ 0.2*	*+ 0.6*	*+ 0.4*
Services	*128.6*	*+ 2.0*	*+ 1.8*	*+ 2.1*	*+ 2.4*
Private fixed investment	67.9	—	− 1.2	− 3.6	+ 2.2
Housing	*21.4*	*− 0.2*	*− 0.6*	*+ 1.2*	*+ 1.3*
Other new construction	*19.3*	*+ 0.1*	*+ 0.3*	*+ 0.2*	*+ 0.3*
Plant and equipment	*27.1*	*+ 0.2*	*− 1.0*	*− 2.5*	*+ 0.5*
Stock-building	11.4	− 4.7	− 3.6	− 2.1	+ 6.8
Government purchases of goods and services	97.5	+ 2.1	+ 1.4	+ 3.4	+ 2.3
Net exports of goods and services	1.2	+ 1.7	+ 0.9	+ 0.2	− 1.4
Gross national product : current prices	**501.3**	**− 1.5**	**—**	**− 3.7**	**+ 15.3**
Gross national product : constant (1960) prices	504.8	− 4.6	− 1.3	− 5.1	+ 14.0

Source : *US Economic Indicators*, August 1961.

Table 3. United States balance of payments

$ million, seasonally adjusted, annual rates

	1960				1961	
	I	II	III	IV	I	II
Exports of goods and services	+ 26,260	+ 27,312	+ 27,416	+ 28,212	+ 28,380	+ 27,160
Imports of goods and services	− 23,700	− 24,096	− 23,496	− 22,016	− 21,912	− 22,040
Current balance	+ 2,560	+ 3,216	+ 3,920	+ 6,196	+ 6,468	+ 5,120
Foreign long-term capital (net)	+ 748	+ 600	+ 92	− 252	+ 476	..
US grants and capital (net)[a]	− 5,896	− 6,072	− 7,588	− 10,260	− 8,308	..
of which						
Government	− 2,328	− 2,780	− 2,420	− 3,472	− 3,548	..
Private	− 2,776	− 2,440	− 4,340	− 5,868	− 3,920	..
Balance on recorded capital transactions	− 5,148	− 5,472	− 7,496	− 10,512	− 7,832	..
Balance on all recorded transactions	− 2,588	− 2,256	− 3,576	− 4,316	− 1,364	..
Unrecorded transactions : errors and omissions	+ 132	− 568	− 848	− 1,308	+ 212	..
Increase in US reserves[b]	− 2,456	− 2,824	− 4,424	− 5,624	− 1,152	+ 800[c]

Source : *US Economic Indicators*, August 1961. + = inflow of foreign exchange ; − = outflow of foreign exchange.

(a) Includes remittances and pensions not shown separately.
(b) Decrease in foreign gold and recorded liquid dollar assets through transactions with United States.
(c) Includes special debt repayment to the United States Government of loans of $650 million.

In *Western Europe* output seems to be growing more slowly and it seems possible that there may be an appreciable pause in the economic expansion. Much of the evidence is contradictory, but the predominant indications for the major countries suggest that the pace of expansion is slowing down. In *West Germany*, industrial production in July was (after seasonal adjustment) only slightly higher than in January ; unemployment has stabilised in recent months, and the number of unfilled vacancies has fallen since the beginning of the year—by June they were 20 per cent less than in January. At the same time, consumer prices are rising and in July were nearly 4 per cent above October 1960. In the second quarter, total new orders were only 102 per cent of current deliveries, compared with a yearly average of 109 per cent in 1959 and 108 per cent in 1960 (table 4). Domestic and foreign orders for investment goods fell sharply between the first and second quarters of 1961. On the other hand, both domestic and foreign orders for consumer goods rose, although this may have been partly seasonal.

Table 4. West Germany : new orders as a percentage of current sales

	1958	1959	1960	1960				1961	
				I	II	III	IV	I	II
Home orders									
Raw materials	96	107	103	107	104	102	99	99	97
Investment goods	100	110	117	121	114	122	112	116	102
Consumer goods	93	109	98	93	111	90	99	90	110
Total	97	108	107	108	109	107	104	103	102
Foreign orders									
Raw materials	98	109	102	99	107	97	103	99	99
Investment goods	95	114	123	129	124	126	113	118	107
Consumer goods	98	109	102	102	107	94	105	98	114
Total	97	112	114	117	117	113	109	110	105
Total orders	**97**	**109**	**108**	**110**	**111**	**108**	**105**	**105**	**102**

Source : *Die Wirtschaftliche Lage*.

It is difficult to tell whether German exports, apart from seasonal variations, have been stable or falling so far this year ;[1] but the steady expansion has come to an end for the time being. Imports, on the other hand, have been rising, especially since revaluation. This is due wholly to a continuing rise in imports of finished goods ; imports of foodstuffs have been falling because of last year's good crops, and imports of materials have stabilised. The net effect has been some reduction in the visible trade surplus, although it remains well above last year's level, and there is still a large overall surplus on the balance of payments.

The declining trend of export orders, especially for investment goods, for which the inflow of new orders has recently been little greater than the level of deliveries, suggests that exports will not increase much in the immediate future. The revaluation was followed by a very slight decline in Deutschmark export prices (less than 1 per cent) ; this was chiefly in the consumer goods industries, and the inflow of orders there has not fallen off.

The German economy is now subject to a marked tendency to inflation. Since mid-1960, weekly wage and salary rates in total have been rising steadily at the rate of about 8 per cent a year. While employment has increased by about 2 per cent in the past year, the total wage and salary bill has risen by 13 per cent ; so there has been a significant amount of " wage drift ". Further increases in wages are likely later this year, in particular in engineering which may set the pace for other industries. Meanwhile, the rate of growth of total national output has slowed down ; over the past year it was probably not much more than 4 or 5 per cent, and must have declined further during 1961. So far this difference has been reflected in only a small rise in industrial prices—2 per cent from mid-1960 to mid-1961—and there must have been a considerable reduction in profit margins ; there will have been a small relief, too, from falling import prices following revaluation. But the forces making for higher prices in Germany look much stronger than they have been at any time since the early post-war years.

It thus appears that revaluation, together with the tendency to inflation, may now be starting to have some effect on German foreign trade, by increasing the opportunities for competition in domestic markets, and by making it harder for German industry to sell abroad.

In *Belgium* and the *Netherlands*, the trend of industrial production since the beginning of the year seems to be only slightly upwards. In *Italy* expansion continues, but at a considerably slower rate than last year. Of the EEC countries, only *France* appears to be maintaining her former pace of industrial expansion.

Primary producing countries

The reserves of the *overseas sterling area* have risen since the beginning of the year. Partly because of Australia's IMF drawing but largely because of a reduction of imports, their sterling balances rose by £163 million in the second quarter. The fall of imports has been particularly marked in Australia but there have also been substantial reductions in South Africa and Ceylon. In both these countries and in New Zealand reserves remain low though losses have been checked. Total imports of the area are likely to start to rise soon, particularly in Australia, where the Budget contained increased Government expenditure and made small tax concessions to consumers ; an early and general increase in activity is expected, with fairly easy monetary conditions. Elsewhere no big rise seems likely until reserves have been rebuilt, the more so since export prices remain weak and the volume of exports is not likely to grow rapidly so long as Western Europe (including Britain) has only a slow growth in output.

After a period of recovery, exports of *non-sterling primary producers* seem to have been falling again since the middle of 1960, partly as a result of political developments in Cuba and the Congo. On balance, imports continued to rise in the second half of the year, with a recurrence of reserve losses in Latin America. Except in Venezuela, where there has been a marked improvement, these losses have continued in 1961, despite a renewed fall in imports and higher drawings from IMF. Outside Latin America, reserves have changed little over the past year, though the level of trade has fluctuated.

United Kingdom export prospects

Such recovery in exports as has taken place this year has been due to deliveries of ships and aircraft, most of which were ordered some time ago. Overseas orders for both ships and aircraft have declined sharply in the last year or two and deliveries are likely to slow down soon. Other exports can be expected to rise, in view of the buoyancy of the United States and European markets. On the other hand sales to most primary producing countries are unlikely to increase yet, and even if imports into the overseas sterling area cease to decline Britain's share in this trade may continue to fall. It seems more reasonable to expect a level of total exports (after

[1] German exports, as adjusted for seasonal variation by the OEEC Secretariat, show somewhat irregular fluctuations in the first half of this year. The seasonally adjusted figures published by the Bundesbank show a steady, although slight, decline from December 1960 to June 1961.

Table 5. United Kingdom imports, 1960–1961

Monthly averages, seasonally adjusted

	October to January (A)	February to April (B)*	May to July (C)	Percentage change from A to C	Percentage change from B to C
£ million					
Total imports	**392**	**371**	**362**	− 7½	−2½
Food, beverages and tobacco	134	122	122	− 9	−
Basic materials	90	88	81	−10½	−
Fuel	44	42	39	−11	−7½
Semi-manufactures	75	70	69	− 8	−1½
Finished manufactures	47	48	49	+ 4	+2
Index numbers of volume, 1954 = 100					
Total imports	**142**	**137**	**133**	− 6½	−3
Food, beverages and tobacco	126	119	119	− 5½	−
Basic materials	112	110	99	−11½	−9½
Fuel	175	168	157	−10	−6½
Semi-manufactures	176	170	166	− 5½	−2
Finished manufactures	281	292	295	+ 4½	+1

Source : Board of Trade and NIESR calculations.

seasonal adjustment) about 2-3 per cent higher by the end of the year than in the first half. Subsequently, in the first half of 1962, further rises in exports can be expected. It would be quite reasonable to hope for a 5-8 per cent increase in exports compared with the first half of this year by the middle of 1962.

Imports

The volume of imports (seasonally adjusted) declined by one eighth between the peak month in January and the lowest point reached so far in July ; it then rose slightly in August. Import prices were at the same level in July as in January, after having risen up to May and falling subsequently ; they fell again in August.

Comparison between particular months probably exaggerates the decline of imports in the first half of the year. A truer picture (which probably also minimises the distortions due to dock strikes) is obtained by comparing the months May-July with the preceding three months and with the rate of imports in the period October 1960 to January 1961. In May-July, the volume of total imports was 3 per cent below the rate in February-April and 6½ per cent below the rate in October-January (table 5, chart 1).

Apart from imports of finished manufactures, which continued to rise, all the main categories of imports contributed to the decline. In August, when the volume and value of imports (seasonally adjusted) was much the same as in the average of the previous three months, imports of finished manufactures were higher, imports of food down, and the other main categories of imports hardly changed.

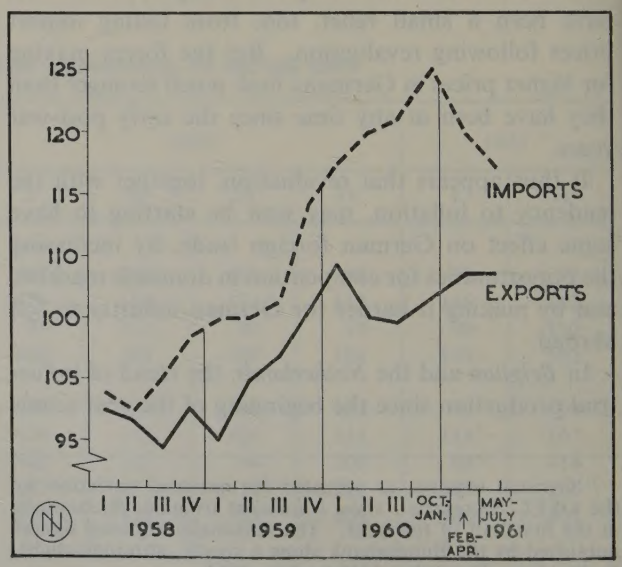
Prospects for imports

It seems likely that imports will now level out for a time ; but if, as expected (see below), domestic expenditure begins to increase again early next year, the volume of imports is bound to follow. Nevertheless, it now seems probable that the recovery of imports will be slower than was suggested in the last Review. By mid-1962 the volume of imports might be 2-4 per cent above recent levels.

The marked rise in import prices that also seemed possible now looks less likely. Excess supplies of

Chart 1. Import and export volume

Index numbers, 1954 = 100, seasonally adjusted



Source : *Appendix, table* 17 and NIESR estimates.

foodstuffs and some other commodities persist, in spite of the recovery in the United States, and may well continue in view of the slowing-down of growth in Continental Europe and the slow expansion of the British economy. On balance, it is unlikely that total imports will alter much during the rest of this year from their low second quarter levels, unless there are sharp stock reductions, and they may then rise fairly slowly up to the middle of 1962, with rising home demand and a probable resumption of stock-building.

The balance of payments

The decline of visible imports during the first half of the year led to a considerable improvement in the balance of payments, and although visible exports hardly changed the invisible balance improved seasonally. In the second quarter, there was only a small current account deficit ; this amounted to £15 million. In the third quarter, there may be a slight surplus, even though this is a seasonally unfavourable time of the year for exports and even though there will probably be a small invisible deficit. The invisible balance may become worse as a result of seasonal expenditure on travel, some further rise in current overseas expenditure by the Government, the bigger interest payments on overseas debt resulting from higher interest rates and continued depression in the profits of the oil companies.

Despite the improvement in the current balance, there remains a large overall deficit on current and long-term capital account, taken together, particularly in view of the large exports of ships, which may largely represent capital exports by British firms, offsetting the credit item in the current balance.

The rise in the sterling balances in the first half of the year suggests that the overseas sterling area had an overall surplus of roughly £100 million apart from IMF drawings. The sterling area as a whole was probably in approximate overall balance with the rest of the world, at the seasonally favourable time of the year.

Payments prospects

In the rest of 1961, the rise in exports and approximate stability of imports which were predicted above are likely to bring a substantial further improvement in the underlying payments position of the United Kingdom. This improvement will be hidden to some extent in the published figures for the second half of this year by the normal seasonal deterioration (including the North American loan interest) ; even so they may show an approximate balance on current account, which would still imply a large overall deficit.

If, as seems likely, exports rise faster than imports in the first half of 1962, and there is the normal seasonal improvement in the balance of payments, there may be a fairly substantial current surplus. In addition, the Government's efforts to restrict long-term investment overseas and to persuade firms to repatriate more of their overseas profits may check the recent rise in the net long-term capital outflow. On balance, it seems quite possible that the first half of 1962 will see a small overall surplus ; allowing for seasonal factors, this might mean an overall position reasonably close to balance.

Such an achievement would be a big improvement on the heavy overall deficits of 1959, 1960 and (almost certainly) of 1961. It would mean that the immediate threat to sterling would have been averted by changes of less superficial significance than the present attractive power of high interest rates and the massive support received from the International Monetary Fund.

The fact remains, however, that the United Kingdom balance of payments still seems to be fluctuating around an average which is seriously inadequate. The first half of 1962 is likely to prove an unusually favourable period for the payments position, with domestic activity well below full capacity, with low import prices and with favourable market opportunities in most parts of the world. Even if some overall surplus were achieved in such circumstances, the implications for the balance of payments in the longer run are not encouraging—particularly if the Government is ultimately successful in achieving faster growth (with the additional imports this must inevitably demand) and if the United Kingdom enters the European Economic Community. The sharp increase in the pressure of competition would almost certainly have a considerable initial impact, even though the longer term effects are likely to be beneficial. The main immediate hope that the payments position might reach a rather more satisfactory level derives from developments in Germany. The exchange rate adjustments of last March, inadequate as they were, may combine with a period of rising costs in Germany to improve the competitive power of British exports.

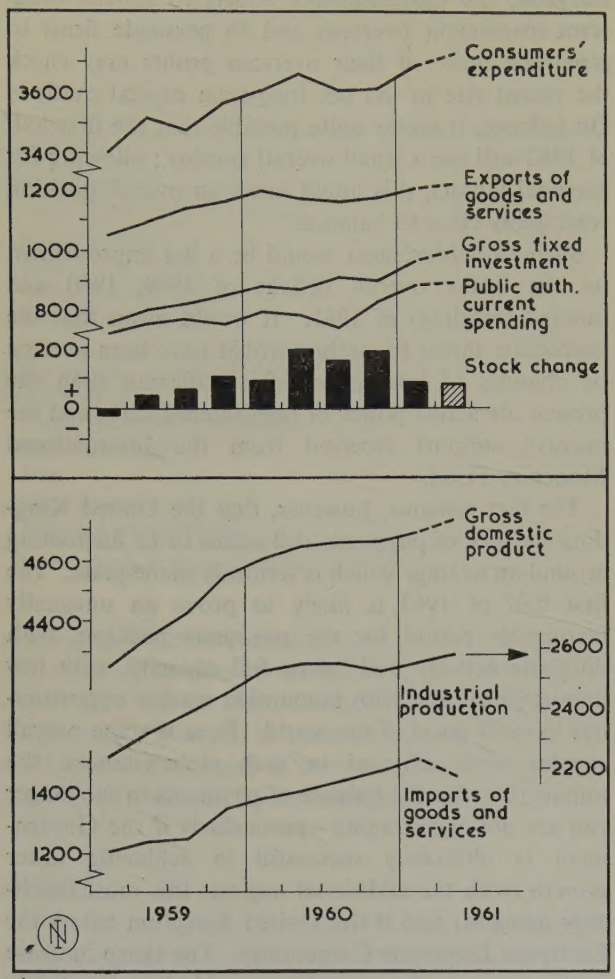
THE DOMESTIC ECONOMY

In the first half of 1961, gross domestic expenditure and output were rising at a modest rate, mainly because of a rise in consumers' expenditure and fixed investment. In the rest of the year and the first half of 1962, exports may increasingly prove the most buoyant element in the very slow rate of growth of demand that can be expected ; consumption is likely to increase relatively slowly and fixed investment may turn down.

The modest rise in expenditure and output which occurred in the first quarter of 1961 continued in the

Chart 2. National expenditure and output

£ million, 1954 prices, seasonally adjusted



Source : *Appendix, table* 1 and NIESR estimates.

second. Total expenditure, after rising by nearly 1½ per cent in volume between the fourth quarter of 1960 and the first quarter of 1961, in spite of a sharp reduction in stockbuilding, probably rose by about 1 per cent in the second quarter when the rate of stockbuilding was little changed. Imports of goods and services fell sharply in the second quarter, after having remained roughly constant in the first, so that United Kingdom output rose faster than total expenditure.

Consumers' expenditure

Estimates of the volume of consumers' expenditure suggest that after the sharp rise in the first quarter, there was a further rise of under 1 per cent (seasonally adjusted) in the second quarter. The 11 per cent increase in the estimates of expenditure on cars and motor cycles accounted for nearly half the rise. Other consumption was increasing very little indeed in the second quarter but in July-August there was probably a further rise ; the volume of retail sales in July-August was about 1 per cent (seasonally adjusted) above the second quarter ; it may include the effects of some anticipation of tax increases. There was a small recovery in sales of household durables (5 per cent) which were still well below the level of sales before the April 1960 hire-purchase restrictions (see chart 3). Expenditure on non-durable goods and on services hardly changed. The slight decline in clothing sales continued.

Total consumers' expenditure in the second quarter was only 1.7 per cent in volume above a year earlier. Spending on cars and household durables is less than a year ago. The only items to show a substantial rise (over 5 per cent) are drink and tobacco and ' all other goods ' (Appendix, table 11).

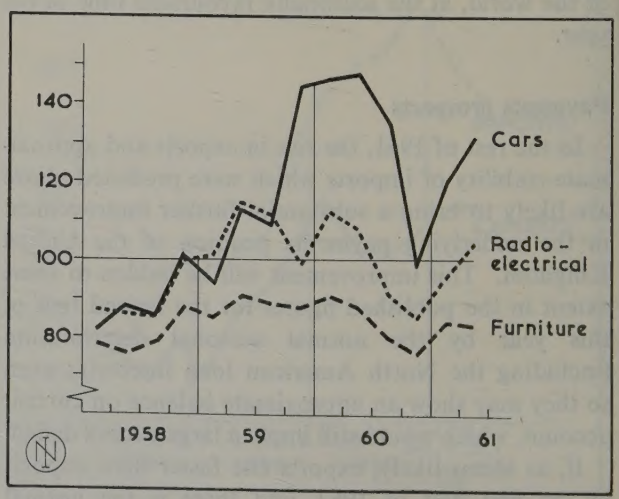
Consumer debt was showing a slight upward trend in the second quarter, mainly because of increases in personal and professional bank advances and hire-purchase debt for purchases of vehicles. In August, hire-purchase business declined, especially for cars ; this was largely a seasonal fall, but probably not wholly. Total new car registrations also fell markedly in August compared with June and July ; again it is difficult to say whether the decline was more than seasonal.

Fixed investment

Revised figures show that fixed investment in the first quarter had increased by nearly 6 per cent over the previous quarter ; this is rather more than was believed earlier—it now appears that private non-manufacturing investment was still rising. Preliminary estimates suggest that a smaller rise took place in the second quarter : fixed investment other than housing

Chart 3. Spending on durables

£ million, 1954 prices, seasonally adjusted



Source : *Appendix, table* 11.

Table 6. Changes in stocks in manufacturing and in stocks of imported materials

£ million, 1954 prices

	Stocks in manufacturing			Imported materials	
	Materials and fuel	Work in progress	Finished goods	Industrial materials	Fuel
1960 I	+29	+18	+56	−11	− 2
II	+46	+57	+28	+10	+12
III	+95	+21	+ 2	+51	+13
IV	+25	+23	+61	+14	− 2
1961 I	+18	+17	+25	+14	+13
II(p)	− 6	+44	+14	+ 4	+12

Source : *Appendix, tables* 14 *and* 17.
(p) Provisional.

continued to increase ; and for the first time for over a year, the volume of work done on house building began to rise again markedly, by about 4 per cent above the preceding quarter.

Stocks

Stock accumulation in manufacturing and distribution, seasonally adjusted, is estimated to have been only slightly less in the second quarter than in the first. Manufacturers' stocks of materials and fuels fell for the first time since the start of the stock boom at the beginning of 1960 ; this decline probably contributed to the fall in imports and there may have been a slight decline in total stocks of most imported commodities.[1] Manufacturers' work in progress rose sharply ; no adjustment is available for this figure but it is likely that this change was largely seasonal.

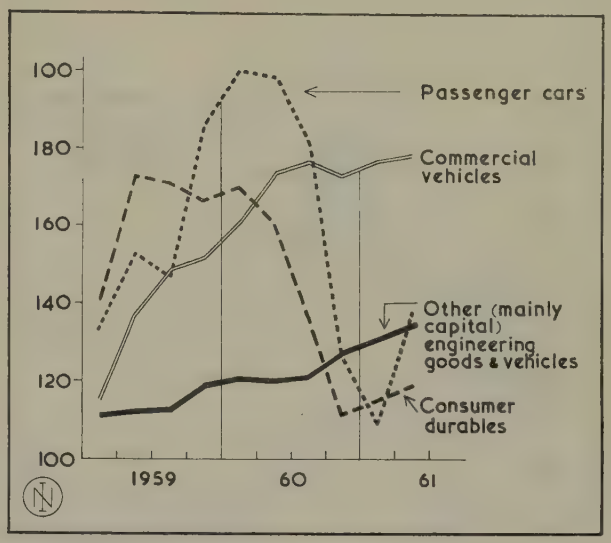
Industrial production and the labour market

Industrial production rose 1.8 per cent between the first and second quarters ; in July it was still rising slowly. It had then risen 4½ per cent since the beginning of the year. The main reason was the continuing rise in output of plant and machinery. In the *engineering* industry, production was 9 per cent higher in July than in the first quarter of 1961 and 11 per cent higher than in the last quarter of 1960 ; the increase was greater in capital goods and output of consumer goods (notably refrigerators and television sets) continue to stagnate. The slight rise in exports of capital goods has been only a minor

[1]But for the large addition to copper stocks, there would have been a £10 million fall in stocks of imported industrial materials instead of the £4 million rise shown in table 6.

Chart 4. Output of engineering goods and vehicles

Index numbers, 1954 = 100, seasonally adjusted



Source : *Appendix, tables* 2 *and* 3, NIESR calculations.

factor ; it is the continuing rise of industrial investment at home which has kept output rising. The inflow of new orders for engineering products was still fairly high in the second quarter, mainly because of a rise in export orders ; in recent months home market orders have shown signs of falling and the net effect is that total new engineering orders were 10 per cent lower in the second quarter than in the first. Total orders on hand continue to rise and are at record levels (chart 5).

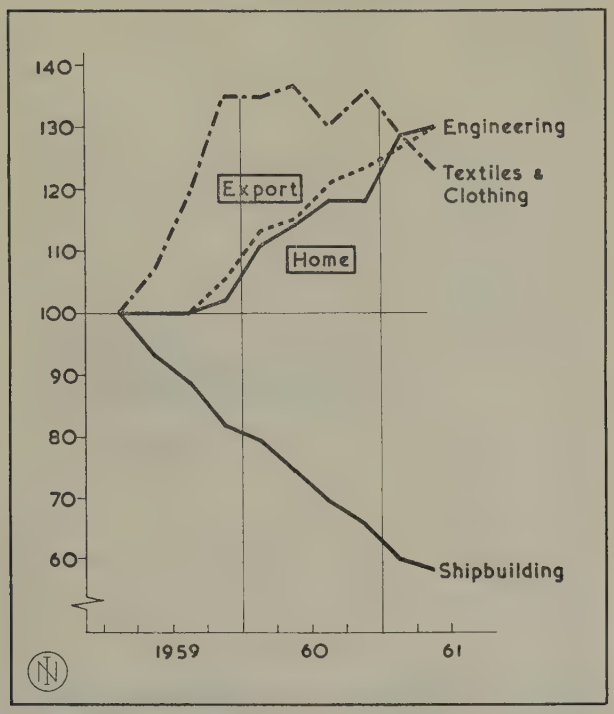
No other industrial groups have shown recoveries in output in recent months comparable with those in the engineering capital goods trades. *Vehicle* production in July was 5 per cent above the first quarter and 7 per cent higher than in the last quarter of 1960, mainly because of the recovery in home sales of cars and the continuing boom in commercial vehicles.

Steel output from March to July was 4-5 per cent below the January-February peak ; it fell again sharply in August. Consumption of steel has been fairly stable for over a year : the effect of rising demand from the capital goods industries and construction has been offset by the fall in demand from the motor industry. Steel stocks fell in the second quarter ; they probably fell even more sharply in the third quarter, so explaining the fall in output.

The *textile* and *clothing* industries have shown some recovery in output since the first quarter of 1961, but textile output is appreciably below 1960 levels and both new orders and the length of existing order-books have been declining. Output of *chemicals* reached a peak at the beginning of 1961 after a very

Chart 5. Orders on hand in industry

Index numbers, 1st quarter 1959 = 100



Source: *Appendix, table 5.*

rapid rise over the two preceding years ; it was then unchanged until June, when it rose again.

There were signs that the labour market was easing before the Chancellor's measures were announced in July ; unemployment (seasonally adjusted), having fallen to 285 thousand in May, increased slightly in each of the three subsequent months. Between May and August there were small increases in unemployment in almost all industries. The reversal in the trend of unfilled vacancies came a little later, but a marked fall occurred in August.

Wages, costs and prices

Wage rates have risen only slowly since January. In the six months from January to July, weekly wage rates in manufacturing rose only by 0.8 per cent and in all industries by 1.3 per cent. This pause in the rise of wages also appears to have been accompanied by an equivalent slowing down in the rise in earnings. Hourly earnings in manufacturing rose no faster than hourly rates in the period October 1960 to April 1961.

Wholesale prices of manufactures were in August about 2¼ per cent higher than at the beginning of the year, although industrial costs have been more or less stable. Prices of materials used in manufacturing industry have been stable since June at the level of the beginning of the year, and the rise in production

Table 7. Unemployment and unfilled vacancies, 1961

Thousands

	Seasonally adjusted[a]		Total unemployed[b]	Not seasonally adjusted	
	Wholly unemployed	Unfilled vacancies		Temporarily stopped	School leavers
Jan.	300	317	367	59	8
Feb.	286	322	337	4	3
March	286	327	317	30	2
April	299	332	327	19	10
May	285	345	304	17	2
June	292	354	305	12	1
July	297	348	311	9	5
Aug.	309	326	349	8	32
Sept.	308	322	348	26	14

Source : Ministry of Labour Gazette.

(a) Ministry of Labour adjustment.
(b) Total unemployed = wholly unemployed, seasonally adjusted, plus temporarily stopped and school-leavers, unadjusted.

since then has been more than sufficient to offset the rise—of about 2 per cent—in the wage bill of manufacturing industry as a whole between January and July. This implies that profit margins in total have recovered considerably from their squeeze during last year ; company profits (seasonally adjusted) rose in the first quarter of 1961 after falling for a year (Appendix, table 10). The recent increase may well have been confined to capital goods industries where, alone, output has been rising.

The underlying trend of the retail price index continues upwards. In July, the index was stable as a result of a seasonal fall in fruit and vegetable prices. The August figure showed an increase of 1 per cent as a result of the surcharges on indirect taxes.

Domestic prospects

Consumers' income and expenditure

The slow rise in consumers' real expenditure (other than that on cars) between the first and second quarter of 1961 reflected a slow rise in real disposable income. This in turn has mainly been the result of two things : the slow rise in money wages and the relatively rapid rise in prices. The Chancellor's July measures will have the effect of reinforcing and extending the period of operation of these effects. The ' wage pause ' is intended to extend the period in which rises in money incomes are very slow ; the surcharges on indirect taxes have raised consumer prices and so reduced the real value of money wages.

The immediate effect of the sharp price rises which have been induced by the Chancellor at a time when money incomes are probably still rising very slowly could be to reduce the volume of consumer spending. No large-scale setback to total consumer spending

seems likely ; it is possible that one of the consequences of the Government's policy will be that consumers attempt to maintain their former levels of real consumption by accepting some reduction in their savings—which should be relatively easy to do when savings are so high.

In the rather longer run, consumer spending will largely depend on the outcome of the round of wage negotiations which is currently starting. Some wage increases will be introduced this autumn as a result of earlier negotiations, notably by the builders and the printers, which together will raise the wage rate index by about 1 per cent in September/October. But the main question is the extent of the increases that will be awarded to key groups in the current round of negotiations. The Government's policy may lead to some lengthening of the process of negotiation and may result on average in rather smaller settlements than would otherwise have occurred. Nevertheless, it can be expected that substantial wage increases will have been granted by the spring or early summer of 1962. The order of magnitude of the rise could well be 5 per cent or more for most wage earners, since it seems likely that by the time the increase comes, retail prices will have risen nearly 5 per cent since the last wage round ; they have already risen 3.4 per cent since November 1960 and they are likely to rise further. Moreover, there is not likely to be any sharp increase in unemployment. The overall increase in money incomes over the year from mid-1961 to mid-1962 could approach 5 per cent. If the savings ratio remained unchanged, the rise in real consumption might be 1-2 per cent. It is, of course, uncertain whether the savings ratio will remain unchanged ; on the one hand the credit squeeze may tend to reduce consumer debt and increase the savings ratio, while on the other hand, the consumers whose real incomes continue to be squeezed by rising prices may well reduce savings in order to maintain real consumption.

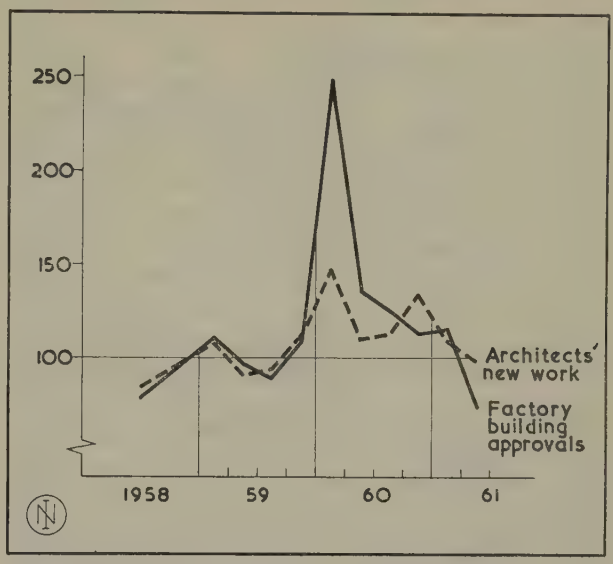
Investment prospects

It seems increasingly likely that the investment boom will soon come to and end and the Chancellor's July measures may reinforce this tendency. Quite a marked downturn of investment is possible some time in 1962, mainly because of the likelihood of a downturn in manufacturing investment, which may be reinforced by reduced public investment and private house building.

The Board of Trade investment intentions inquiry suggests that fixed investment by manufacturing industry in the second half of 1961 will be about 2-3 per cent higher than in the second quarter of the year and that in 1962 it will fall back a little. The answers to the inquiry were almost all made before

Chart 6. Investment : forward-looking indicators

Index numbers, 1959 = 100



Source : *Appendix, table 5.*
(a) Seasonally adjusted.

the Chancellor's measures were announced ; these measures are likely to slow investment in manufacturing further. This is also suggested by other forward indicators. In the first half of 1961, architects' commissions and contractors' orders for private industrial investment showed a marked fall compared with a year earlier ; both factory building approvals and new engineering orders fell sharply in the second quarter (chart 6).

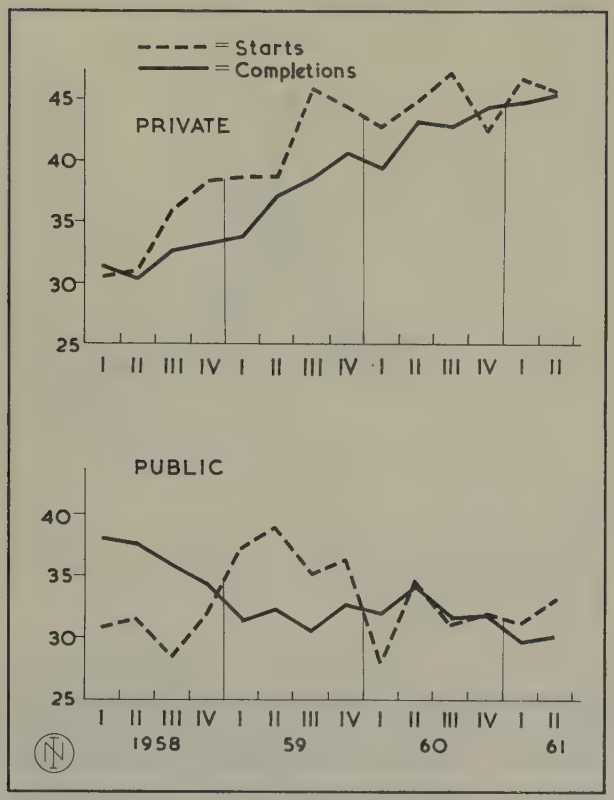
The Board of Trade enquiry suggests that fixed investment in distribution and services may continue to rise in the rest of 1961 but show little further increase through 1962. This broad prognostication is confirmed by the other indicators ; architects' commissions are higher than a year earlier (although there has been a sharp drop in commissions for private office building) and orders to contractors continue to grow.

Private house building starts (seasonally adjusted) have been below the peak reached in the third quarter of 1960 for three successive quarters and completions are now moving roughly level with starts, after lagging behind in most of 1959 and 1960. New commissions to private architects for private housing fell in the second quarter to the lowest figure since 1958. Private orders to contractors for new houses fell in the second quarter of 1961, but the dip may have been purely seasonal.

In 1960 and again in the first half of 1961, the building societies have been lending more than their net receipts and they were becoming increasingly short of funds (chart 8). The effect of the new financial restrictions will be a further reduction in the

Chart 7. Housing starts and completions

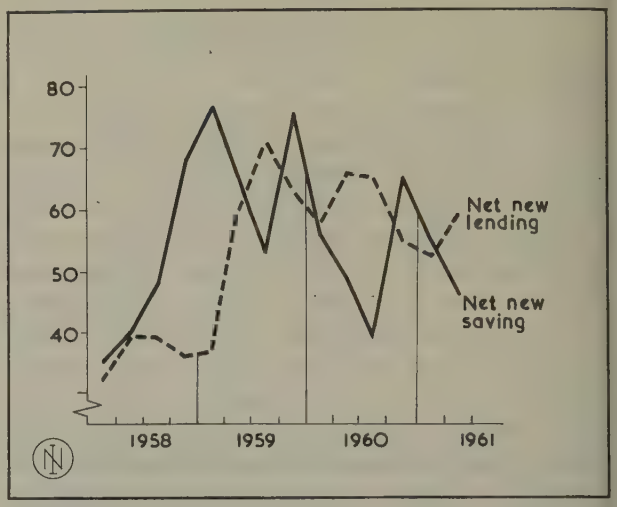
Thousands, seasonally adjusted



Source : *Monthly Digest of Statistics*, seasonally adjusted by NIESR.

Chart 8. Building societies : new net saving and lending

£ million



Source : *Report of the Chief Registrar for Friendly Societies*, 1960, Building Societies' Association, and NIESR estimates from figures for societies holding 90 per cent of total assets.

funds available for new advances, which may be reinforced by the suspension after the end of November of the special House Purchase Scheme ; directly this only affects houses built before 1919, but it is likely that some of the funds which would otherwise have been available for new houses will now be used to finance pre-1919 property. The indications are that private house building may now have reached its peak and may decline in the next year.

In the first half of 1961, housing starts for public authorities moved ahead of completions, after being roughly equal in the three preceding quarters. On the other hand, orders to contractors for public authority housing fell back sharply in the second quarter, after an earlier rise, so it seems that the rise in starts was only temporary. The Chancellor's measures are likely to have a marked restrictive effect on housing by local authorities, and probably on much of the rest of public investment, although nothing is known in detail about plans for investment by the nationalised industries next year.

The prospects are therefore that investment in new housing is probably levelling out and may dip, possibly in the early part of 1962 ; that industrial investment has almost reached the top and is likely to fall next year ; and that while investment in commercial property may continue to rise in the rest of 1961, it will level out next year. In total, a modest rise of investment is likely for the rest of 1961, but it may begin to fall early in 1962. Thus, investment is not likely to continue for much longer to be a buoyant element in demand and it may soon start to reinforce the other tendencies to stagnation ; total fixed investment in the second quarter of 1962 may not be appreciably higher than the level achieved in the second quarter of 1961.

Prospects for overall demand

In the rest of 1961, there may be a significant pause in the expansion of demand ; exports are likely to rise a little and fixed investment still to show some buoyancy, but real consumption will probably not increase and there might be a period with almost no stock accumulation or even some stock reductions.

Looking ahead into the first half of 1962, it seems likely that there will be some growth of demand and output, but that it will be slow. If exports and consumption rise to the extent predicted above and if a normal rate of stock accumulation is renewed, these expansionary forces should by mid-1962 offset any contraction in fixed investment. Government current expenditure is also likely to continue slowly upwards. The net effect is that the gross domestic product might rise in real terms by 1-1½ per cent in the year between the second quarters of 1961 and 1962. So slow an increase would result in a substantial rise in the margin of spare capacity in the economy. The gross domestic product would have risen by only about 2½-3 per cent in the two years from the second quarter of 1960, when the last spurt in output came to an end.

PROSPECTS FOR THE BRITISH CAR INDUSTRY

This article is summarised on page 3.

Introduction

This article looks at the prospects for the British car industry in 1965 and 1970. Inevitably an article of this kind, covering home and export markets, has to put forward figures with very varying degrees of probability. Some of the forecasts—such as the forecast of British home demand—have econometric backing ; other figures, such as those of the possible British share in the world export market for cars in 1970, can in the nature of things be little more than illustrative percentages. Many of the guesses will certainly be wrong ; the justification for making them is that any process of planning, whether by a company, an industry, or a country, requires some assumptions about the future.

The article is in three parts. The first attempts to forecast home demand ; the second looks at the prospects for export demand ; the third brings together the figures from the first two sections and compares them with estimates of capacity.

I. FORECAST OF HOME DEMAND[1]

The stock concept

Most forecasts of demand normally attempt first to establish some historical relationship between movements in the consumption of the commodity in question, and changes in incomes and relative prices ; these relationships are then used for forecasting. With cars (as with other durables) there is a difficulty about the concept of consumption. A car is not ' consumed ' immediately ; it lasts a considerable number of years. Further, for cars (unlike most other durables) there is a big second-hand market.

Perhaps the most satisfactory way of dealing with this difficulty is to think of car owners as demanding, and consuming, a certain quantity of ' car services ' each year[2] ; to provide these services a certain ' stock ' of cars is required. One needs, therefore, to compare with income and price changes an estimate of the year-to-year changes in the quantity of this stock. To obtain an estimate of this kind, it would be misleading to take the change in the actual number of cars in use (or the car ' park ') : for obviously some cars provide much more service than others—a new Rolls Royce, for instance, is hardly interchangeable with a pre-war Austin Seven. The estimate must at least take into account the age and size distribution of cars in use.

The forecast of home demand for cars in this article takes these factors into account by using, instead of figures of the car park, the concept of a depreciated stock of cars : that is, the car park adjusted for changes in age and size. Changes in the depreciated stock of cars should give a reasonable measure of changes in

Table 1. Car park, car stock, and new purchases : an illustration

Period (years)	1	2	3	4	5
Cars in use (car park)	100	200	300	400	500
Contribution to depreciated[a] stock of cars in use, aged :					
0 years (new purchases)	100	100	100	100	100
1 year		80	80	80	80
2 years			64	64	64
3 years				51	51
4 years					41
Total depreciated stock of cars	100	180	244	295	336
Increase in stock	100	80	64	51	41
Replacement[b]	—	20	36	49	59
Total demand for new cars ..	100	100	100	100	100

Note : In this hypothetical example, the initial opening stock is shown as 100 new cars, all of the same size. During the ensuing year part of this stock is consumed, so that in the next period it represents only 80 units of car *stock* (a 20 per cent rate of depreciation has been taken). New purchases are assumed to continue at the rate of 100 units a year, and the contributions of cars of different ages to depreciated stock are traced out by the arrows in the table. Changes in depreciated stock therefore represent net new demand for cars, analogous to net investment and this, with replacement demand, adds up to total new purchases. To simplify this illustration, depreciation of new cars during their first year has been ignored and so has scrapping ; but these simplifications leave the argument unaffected.

(a) Assumed annual rate of depreciation of 20 per cent.
(b) 20 per cent of the *stock* in the previous year.

This article was prepared by L. A. Dicks-Mireaux, C. St.J. O'Herlihy, R. L. Major, F. T. Blackaby, and C. Freeman of the National Institute.

(1) The figures throughout this first section refer to Great Britain.

(2) The theory underlying this method of analysis is set out in full in Richard Stone and D. A. Rowe, ' The Market Demand for Durable Goods ', *Econometrica*, vol. 25, no. 3, July 1957. The method has been applied with some success to American demand for motor cars in G. C. Chow, *The Demand for Automobiles in the United States*, North-Holland Publishing Co., 1957, and G. C. Chow, ' Statistical Demand Functions for Automobiles and their Use for Forecasting ', *The Demand for Durable Goods* (ed. A. C. Harberger), University of Chicago Press, 1960.

Table 2. An illustration of a delayed reaction, in car purchases, to an increase in income

Period	1	2	3	4	5	6	7
Real disposable income (Period 1 = 100)		*108*	*108*	*120*	*132*	*132*	*132*
Desired stock of cars		120	120	150	180	180	180
Actual stock of cars	100	110	115	132½	156¼	168	174
Increase in stock		10	5	17½	23¾	11¾	6
Replacement[a]		20	22	23	26½	31¼	33½
New purchases of cars		30	27	40½	50¼	43	39½

Note : In this hypothetical example, it is assumed that in each period consumers move half of the way from their actual stock at the beginning of the period to their desired stock at the end of the period. Thus from period 1 to period 2, desired stock rises 20 units, and actual stock 10 units. The desired stock is assumed to increase 2½ times as fast as the rise in real income.

(a) As in table 1, the rate of depreciation has been taken as 20 per cent, so that replacement demand is 20 per cent of the total stock in the previous year; depreciation of new cars during their first year has been ignored.

the quantity of services provided by cars.[1] Table 1 shows, with a simplified example, the relationship between the figures of car park, car stock, and new purchases ; it also shows how estimates of new purchases can be deduced, once figures of the level of stock have been forecast.

The choice of this method of forecasting assumes that the relationship between changes in income and in the stock of cars is likely to be more constant than the relationship between changes in income and in the car park. This seems reasonable ; for as incomes rise, people demand not only more cars but better cars—they may, for instance, tend to prefer newer and bigger cars. If forecasts are made in terms of stock, this possibility can be allowed for ; usually it is not allowed for in forecasts made in terms of car park, in which all cars are treated as equivalent units.

The model used

In practice there is some difficulty in measuring car stock. First, there are no recent figures of the age distribution of cars in use ; second, some assumption has to be made about size categories ; and finally, depreciation rates need to be established. The likely error in the estimates of the age distribution is small, so that the main results are little affected (Appendix II, page 39). Three broad size categories are used in the estimates : cars with engine capacity below 1,200 c.c., 1,200 to 1,800 c.c., and greater than 1,800 c.c. Depreciation rates were established from the examination of relative second-hand prices for certain models of different ages. These rates were fairly constant for the various size ranges of cars over the post-war period.[2] The final car stock figure obtained in this way may be thought of as the car park expressed in new small car equivalent units. (A fuller description of these calculations is given in Appendix II.)

But before these stock figures can be related to income and other determinant factors, another complication must be allowed for. Consumers' purchases of car services do not respond immediately to changes in their incomes. For instance, a large number of car owners will have had some increase in their income nearly every year ; but very few car owners do in fact sell their car and buy another every year.[3] Their reaction to a rise in income is delayed. A convenient way of representing this delay is to assume that each increase in income brings with it a new desired level of car stock, but that in each year consumers move only part of the way to the new desired level, and do not actually reach it. This way of looking at a delayed reaction to increases in income is illustrated in table 2.

With this modification, a relationship attempting to account for changes in actual car stock was estimated from annual figures for the period 1948 to 1960[4]. The annual figures of actual stock were

[1] For many countries, there are not sufficient figures to construct estimates of past changes in the depreciated stock of cars ; in the second part of this article, therefore, which deals with world demand, the cruder method of using figures of car park has to be employed for a number of the forecasts.

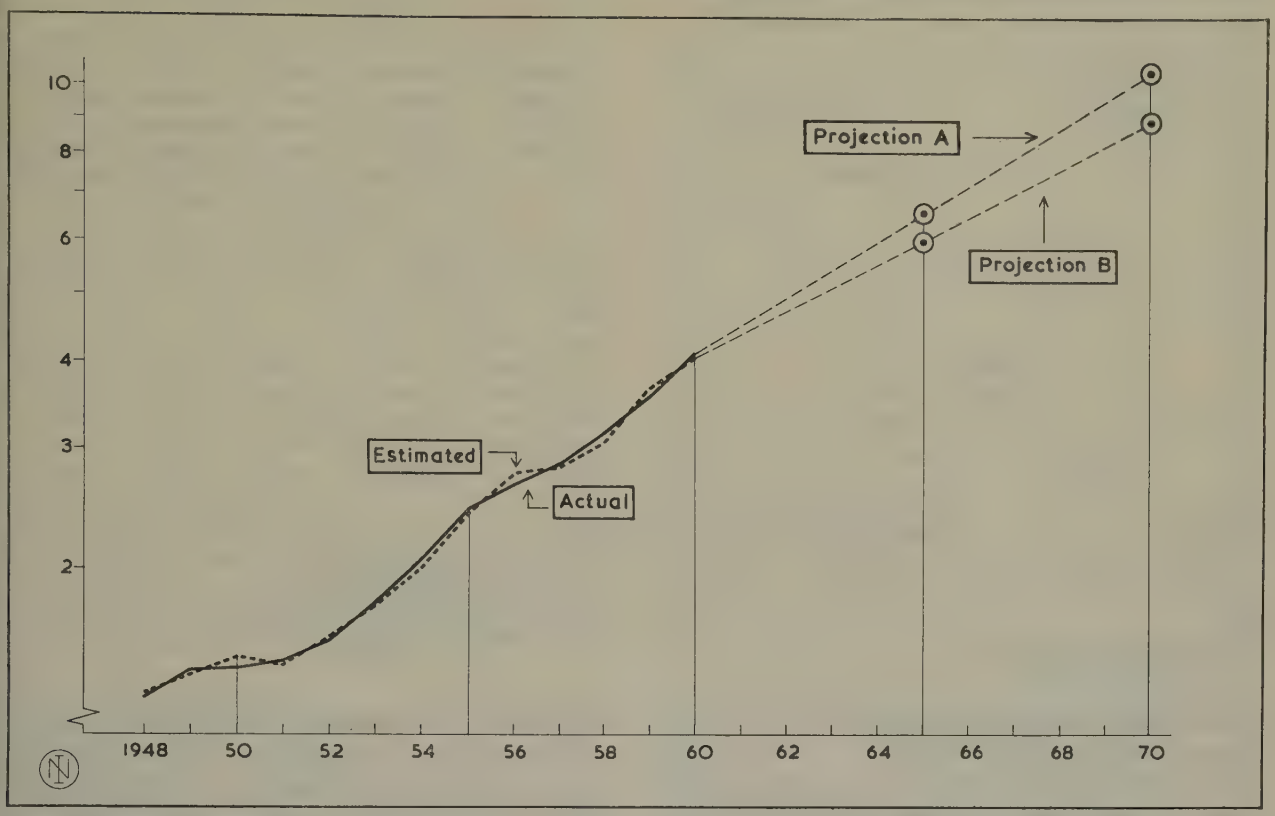
[2] The depreciation rates adopted were 7½ per cent for small cars (engine capacity below 1,200 c.c.) ; 10 per cent for medium-sized cars (1,200-1,800 c.c.) ; and 15 per cent for large cars (greater than 1,800 c.c.). They represent average rates for the period 1948-1960, rather than the rates ruling in any single post-war year. The figures of depreciated stock of cars for each size category obtained in this way were then combined according to the relative prices of representative models in each category in 1959.

[3] Before the war it was estimated " that on average a new car remains in the hands of its original owner for about two years, and that during its life it changes hands about five times ". (*The Motor Industry of Great Britain*, 1939, SMMT Ltd., page 94). The number of hire purchase contracts for used cars suggests that in 1960 something like one-third of the number of cars in use at the beginning of a year change hands during the year.

[4] The method of estimation and the estimates obtained are discussed more formally in Appendix II.

Chart 1. Actual and estimated car stock in Britain, and projected figures for 1965 and 1970

Million new small car equivalents, single logarithmic scale



Source : Appendix II, page 42.

Note: Both projections assume an income-stock elasticity of 2.4, and a rise in real disposable income per head of 2½ per cent a year. Projection A includes a time trend of 3 per cent a year throughout, and projection B a time trend of 1½ per cent a year throughout.

correlated simultaneously with real disposable income, average car prices (relative to consumer prices in general), a factor describing changes in hire purchase regulations, the car stock at the end of the preceding year,[1] and a time trend. Car stock and real income were expressed per head of the total population in each year. The estimated relationship was successful in accounting for 77 per cent of the variation in past changes in actual stock : a comparison of actual stock levels with levels calculated for the period 1948 to 1960 is shown in chart 1.

The predominant influence on the demand for car stock appears to have been real disposable income. There seems also to have been a fairly steady upward time trend, which was independent of the rise of incomes. On the other hand, no significant effect could be found either for changes in price or for changes in hire purchase terms (this may be partly because the measures used for these two factors were inadequate). Each of these determinants of car stock is discussed in more detail below, and the conclusions for the forecast are set out on page 22.

The relationship with income

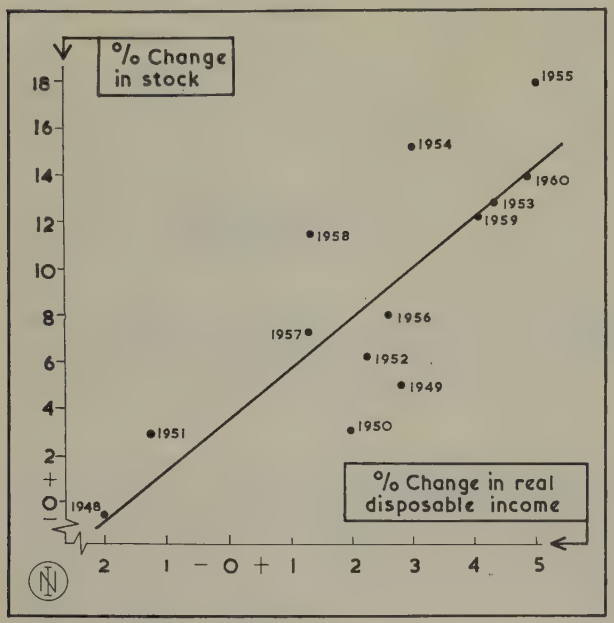
Changes in car stock have been much greater than changes in real income : between 1947 and 1960 car stock per head increased three-fold while real disposable income per head rose by only 35 per cent. On a year-to-year basis the relationship was a fairly close one, as chart 2 shows. This chart does not allow for the delayed reaction of consumers to changes in their purchasing power—so that in a year in which real income failed to rise car stock might still go up because of the inherited effect of previous income changes. Making allowance for this delayed reaction the estimated long-term income-stock elasticity is equal to 2.4 :[2] that is, after all lagged responses of consumers to changes in their income have been taken into account, a given change in their real

[1] This variable enters through the relationship between actual and desired stock. Its estimated coefficient indicates the rapidity with which annual changes in incomes are reflected in annual changes in demand for car stock. (See Appendix II.)

[2] The standard error associated with this estimate was 1.3 (see Appendix II).

Chart 2. Changes in stock of cars in Britain compared with changes in real disposable income, 1948 to 1960

Percentage changes



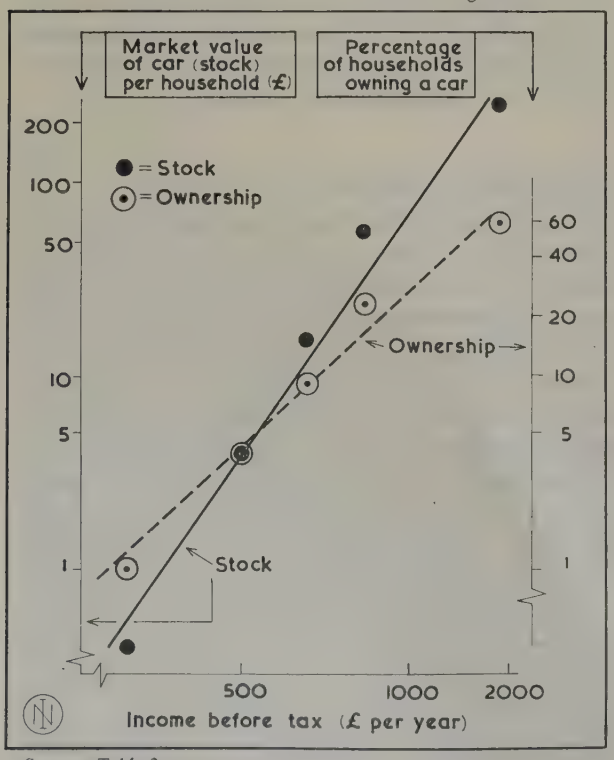
Source : Appendix II, page 42.

income seems to have been associated with a rise in car stock nearly 2½ times as great.

This conclusion from comparisons of the changes in car stock over time is roughly confirmed by comparisons of stock ownership levels in different income groups at the same point of time. Unfortunately not many surveys have been published which give ownership at different income levels in Great Britain. A survey made in 1953 compares the current market value of cars owned (which is tantamount to car stock) with income before tax (table 3 and chart 3) : the estimated income-stock elasticity is again about 2½.[1]

Chart 3. Household ownership of cars in Britain, 1953

Double logarithmic scale


Market value of car (stock) per household (£)
Percentage of households owning a car
● = Stock
⊙ = Ownership
Ownership
Stock
Income before tax (£ per year)

Source : Table 3.

Table 3. Household[a] ownership of cars in Britain, 1953

Income range of household		Average gross income per household	Stock of cars owned per household[b]	Percentage of car-owning households in each income group[c]	Average value of car per car owning household
£		£	£	*Per cent*	£
Not under	*Under*				
	200	131	0.4	1	41
200	*400*	306	4	4	104
400	*600*	488	15	9	171
600	*1,000*	724	55	23	241
1,000		1,859	249	59	422

Source : K. H. Straw, ' Consumers ' Net Worth : the 1953 Savings Survey ', *Bulletin of the Oxford University Institute of Statistics*, vol. 18 no. 1, February 1956, tables VII and XIII.

(a) Income-spending units.
(b) Current market value of cars owned.
(c) This column does not take into account households owning more than one car ; but there were probably very few of these in 1953.

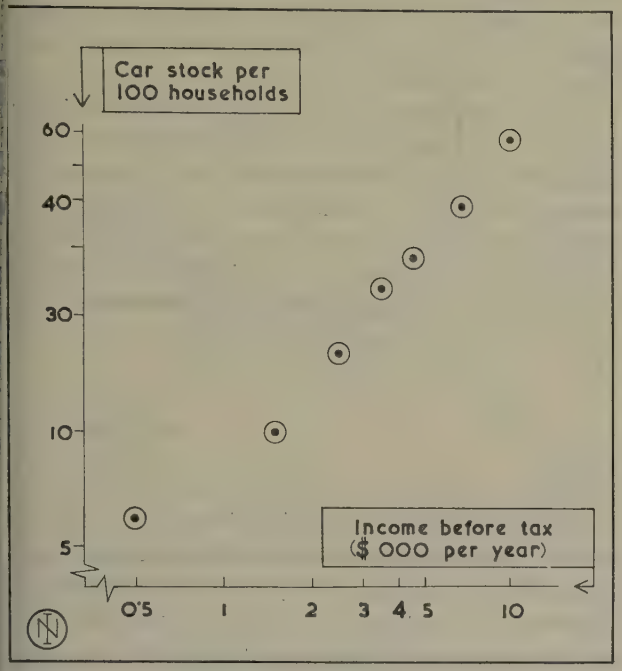
Before using these elasticities for projecting the demand for cars up to 1970, two possibilities must be examined : the possibilities of a ' saturation effect ' and of a ' threshold effect '. There would be a ' saturation effect ' if a sufficiently large number of persons with high incomes felt little further need to continue to increase their purchases of car services as their incomes went on rising ; if enough people felt this, the income elasticity of demand for car stock[2] would be reduced significantly. But there is no convincing evidence of any such effects in the available figures for Britain, America or Sweden. In the British figures comparing income levels, car ownership and car stock in 1953 (table 3 and chart 3) the points which relate cars and income do not show a flattening out at higher income levels. In the United States, the demand for car stock appears to go on rising about as fast at high income levels as at low ones

[1] If income after tax had been used instead of income before tax, the elasticity would have been slightly higher, because of the effect of progressive taxation.

[2] That is, approximately the ratio of the rate at which car stock rises to the rate at which income rises.

Chart 4. Car stock in the United States, compared with household[(a)] income, 1957

New car equivalent units, double logarithmic scale



Source : Table 4, and NIESR adjustments.

(a) Spending units.

(chart 4) ; this is partly because the number of households with two or more cars rises rapidly as income rises (table 4). Further, no saturation effect appears in the Swedish figures (chart 5).

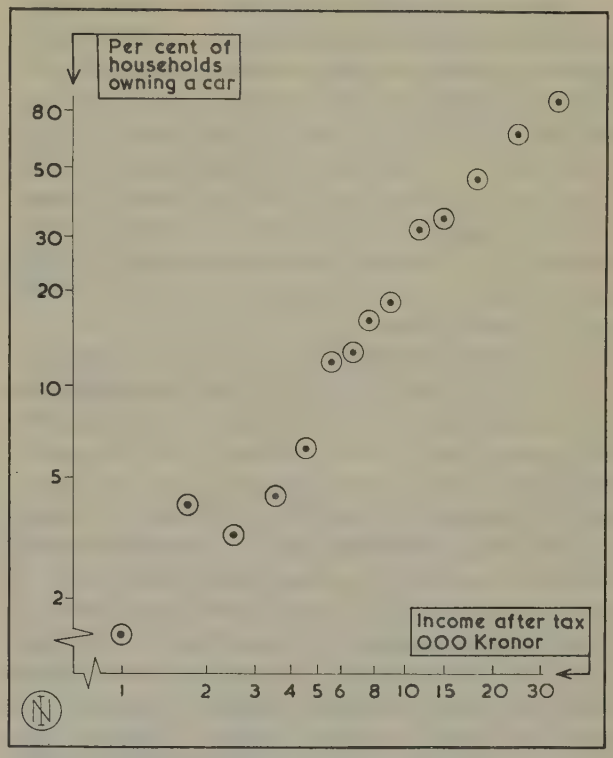
Table 4. Car ownership in the United States, 1957

1956 money income before taxation (dollars)		Percentage of spending units in group owning :	
		1 car	2 or more cars
Not under	*Under*		
	1,000	27	1
1,000	2,000	37	2
2,000	3,000	54	5
3,000	4,000	69	3
4,000	5,000	77	5
5,000	7,500	79	11
7,500	10,000	71	23
10,000 or more		59	37
All spending units ..		62	10

Source : *Federal Reserve Bulletin*, June 1957, supplementary table 12, page 643.

Chart 5. Car ownership[(a)] in Sweden, compared with household income, 1954

Double logarithmic scale



Source : R. Bentzel, *et al.*, *Den privata konsumtionen i Sverige*, 1931-1965, Industriens Utredningsinstitut, Stockholm 1957, page 307.

(a) The figures are for car ownership, not car stock, and take no account of multiple ownership.

The same evidence which throws doubt on any ' saturation effect ' is also evidence against the existence of any ' threshold effect '. Those who argue for the ' threshold effect ' suggest that there is a threshold income, or range of incomes, above which consumers are very likely to buy car services but below which they are not.[(1)] Each individual consumer, of course, has his own ' threshold income '—that is, a point at which he ' crosses the threshold ' and buys a car. There will only be a ' threshold income ' effect for all consumers if these individual thresholds are in fact fairly concentrated within a range. If there were an effect of this kind, it would mean that the income elasticity of demand for car stock would vary considerably as the general rise in incomes carried increasing (or decreasing) numbers of people over this threshold. Suppose—to take a simplified example—very few people with incomes of less than £700 ran a car, while above £700 a year nearly everybody did so. This would mean a sharp once-and-for-

[(1)] The proponents of this effect base their argument partly on the irreducible minimum cost of running a car ; for the range of prices of second-hand cars during this period was such that the capital cost of the cheapest second-hand car was not very different from the capital cost of a television set.

all rise in demand for car stock in the period during which the incomes of a rapidly increasing number of wage earners passed the £700 mark.

If there were an effect of this kind, one would expect to find in the charts which compare income and car ownership a threshold range in which ownership rises relatively rapidly. The British, American and Swedish figures do not show any such range (charts 3, 4, and 5). It is true that the British figures are not given in great detail: so the hypothesis of some threshold income effect cannot be rejected confidently. But there is certainly no positive evidence for it; and if it were a strong and marked effect, chart 3 should show it.

On balance, therefore, there seems no sufficient reason—on grounds of possible 'saturation' or 'threshold' effects—for rejecting the assumption of an income-stock elasticity of about 2½ for the period 1960-1970: that is, the assumption that the stock of cars will continue to rise 2½ times as fast as income, as it did from 1948-1960. This is a higher elasticity than the one which has been found in America, of 1½-2, for the period 1921-1957;[1] and it probably would not be sensible to project the British figure indefinitely into the future, since this would ultimately imply that, at a lower level of income, the level of car stock per head in Britain would be higher than America's. But this possibility is a very long way off; if real income per head in Britain continues to rise at 2½ per cent a year it would take more than 30 years before the level of stock per head was as high here as it is in the United States now.[2] For the period up to 1970, therefore, this comparison with the United States does not provide a reason for assuming a lower figure for Britain than 2½.

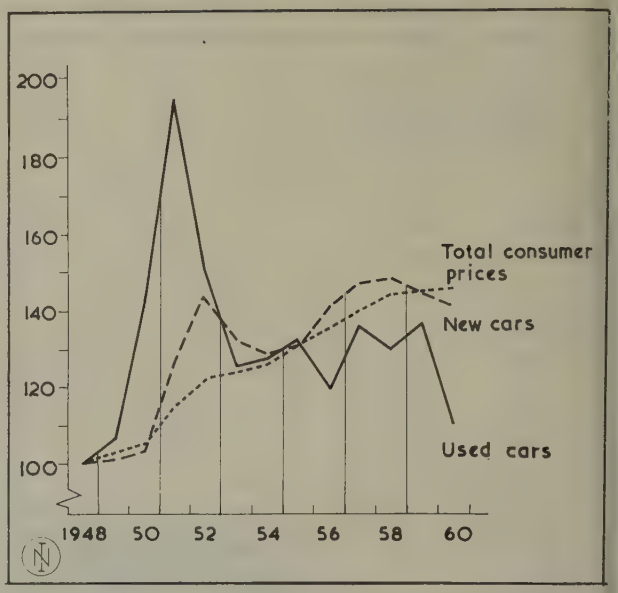
Car prices, hire purchase changes and other factors

Car prices

It is not, perhaps, surprising that no relationship was found between changes in new car prices and changes in the demand for car stock; in fact new car prices did not fluctuate much in this period, for manufacturers did not alter the prices of new cars up and down in line with movements of demand. It is rather more surprising that no relationship was found with second-hand car prices; for these were much more sensitive to demand, and fluctuated a good deal (chart 6). Indeed, it was hoped that the index

Chart 6. Car prices and total consumer prices, 1948 to 1960

Index numbers, 1948=100



Source: *National Income and Expenditure*, 1960, and NIESR estimates.

of second-hand car prices would serve as a measure of the supply limitations on cars, particularly in 1951 and again, to a lesser extent, in 1959. In these years second-hand car prices rose sharply as the waiting list for new cars lengthened. However, no correlation was in fact found between year to year movements in second-hand car prices and car stock. This may be because the price index used for second-hand car prices was inadequate,[3] and the long-run downward trend of second-hand prices may be one of the factors explaining the steady upward time trend (see page 21). It is probably sensible, for the future, to assume that price changes do have some effect on demand. The American evidence[1] suggests a price-stock elasticity of about −1: that is, that a 1 per cent fall in car prices will raise the demand for car stock by about 1 per cent.

Hire purchase changes

The effect which changes in hire purchase regulations[4] have on car demand was also not picked up

[1] G. C. Chow, *The Demand for Automobiles in the United States*, North-Holland Publishing Co., 1957, and G. C. Chow, 'Statistical Demand Functions for Automobiles and their Use for Forecasting', *The Demand for Durable Goods* (ed. A. C. Harberger), University of Chicago Press, 1960.

[2] This comparison is in terms of car stock, and so allows for the fact that the average American car is much bigger than the average British car.

[3] The index (discussed more fully in Appendix II, page 42) is a weighted average of annual price changes of six representative models, each from one to ten years old. The prices used were those available in September of each year. It is possible that the choice of one month in each year may have given rise to annual changes which were somewhat different from changes in yearly average prices.

[4] Two kinds of factor were tried, to represent changes in hire purchase regulations; first, one which reflected both changes in deposit rates and changes in the length of the repayment period, and second, one which took account of changes in the length of the repayment period only. Neither factor showed any marked correlation with annual changes in stock between 1948 and 1960.

in the year-to-year analysis. There may be a time lag problem here. Because second-hand car prices are elastic and new car prices are not, the main impact of hire purchase regulations falls on the sales of new cars. But the regulations have frequently been imposed at times when there were long waiting lists for new cars ; the effect of the restrictions has consequently been delayed, and the extent of the delay has varied with the extent of the waiting list. In 1960, for instance, hire purchase controls were reimposed in April, but the marked fall in car registrations was in the last quarter of the year. This varying delay may be the reason for the absence of any straightforward connection between changes in hire purchase controls and year-to-year changes in car stock.

Table 5. The use of credit in the United Kingdom and the United States, 1952 to 1960

Year	Credit purchasers as a percentage of all purchasers of new cars, in	
	United Kingdom[a]	United States[b]
1952..	8	57
1954..	14	61
1956..	18	63
1958..	22	63
1960..	21	66[c]
1961 (1st half) ..	23	..

Source : HP Information Ltd., *Federal Reserve Bulletin.*

(a) Hire purchase contracts as a percentage of total new registrations ; excludes bank advances.
(b) Includes all forms of credit ; includes bank advances.
(c) 1959.

Other factors

The factors of income, price and hire purchase changes were chosen as the ones most likely to explain the movement in car stock ; with only twelve annual changes, it would not have been useful to include many explanatory variables. But there are, of course, a large number of other possible factors : no precise figures are available for many of them.

Apart from changes in hire purchase regulations, there was the growth in the use of hire purchase credit during the period. Between 1952 and 1958, the proportion of new cars bought on hire purchase rose from 8 to 22 per cent (table 5) ; and the rapid rise in bank advances in the last few years must also have increased the amount of credit available for car buying. The use of credit for new car purchases may still have some way to go.[1]

Cars bought by businesses are another complication. The evidence is uncertain, but it seems fairly clear that they were a much higher proportion of total purchases in the early post-war years than they are now. The implication of the forecasts is that this proportion continues to fall ; if this does not happen, the levels of demand for cars may be slightly higher than suggested.

Changes in running costs might also have had some effect. Up to 1953, they were rising faster than other prices, and from then to 1960, rather more slowly. But over the period as a whole any effect was probably small, since the price increases were not very different : running costs rose by about 40 per cent, compared with an increase of 45 per cent in the price index of all consumer goods.

In addition to the general effect of a rise in incomes, there could be some effect on the demand for car stock if the distribution of incomes changed : a redistribution in favour of higher incomes would, other things being equal, raise the demand for cars, and conversely. But it seems unlikely that the change in the last decade in the distribution of incomes was big enough to have had any appreciable effect.

Finally, there may well have been some change in tastes—a growing preference for car services over other forms of consumers' expenditure.

The time trend

After allowing for the effect of income changes there was a substantial time trend of 3 per cent a year in the car stock between 1948 and 1960. Part of this may be thought of as an ' average ' effect of omitted factors ; part also may be the result of the long-term fall in second-hand car prices which decreased as supply limitations disappeared. This effect was not in fact picked up in the year-to-year analysis (page 20). But long-term supply limitations are now most unlikely, and it seems very possible that the time trend in car stock may become smaller, though it will probably still stay positive ; for there is some reason to expect that relative car prices will fall in the future. First, this is an industry in which greater than average productivity gains can be expected. Second, the price at present contains a very high purchase tax element. In the forecasts of demand for car stock two time trend rates have been used—3 per cent a year, as estimated for the period 1948-1960 (and

[1] Bank credit would probably account for much, but not all, of the difference between the American and British proportions of new cars purchased with credit, shown in table 5. For second-hand cars the proportion purchased with the use of credit in the United States may not be very much higher than in the United Kingdom. In the United Kingdom it appears that about one-half of used car purchases may now be made on hire purchase (though there is some variation in the different estimates).

Table 6. The effect of different assumptions on forecasts of total car stock in 1965 and 1970

Percentage increase in the level of car stock from 1960

	1965			1970		
	Assuming real disposable income per head rises at a yearly percentage rate of :					
	1½	2½	3½	1½	2½	3½
Income-stock elasticity of 2.0						
Time-trend : [a] low	27	41	55	62	98	140
medium	37	51	67	74	113	158
high	37	51	67	88	129	178
Income-stock elasticity of 2.4[b]						
Time-trend : [a] low	31	48	66	72	118	175
medium	41	**59**	78	85	**135**	196
high	41	59	78	99	153	219
Income-stock elasticity of 3.0						
Time-trend : [a] low	37	59	84	88	153	238
medium	48	71	98	102	172	264
high	48	71	98	118	193	291

Source : Appendix II. The central assumptions are shown in bold type.

(a) The low time-trend is of 1½ per cent throughout ; the medium time-trend is of 3 per cent from 1960 to 1965, and of 1½ per cent from 1965 to 1970 : the high time-trend is of 3 per cent a year throughout.
(b) The estimated elasticity.

also for 1926-1938[1]) and a slower time trend of 1½ per cent a year.

Forecasts of car stock in 1965 and 1970

In using this general analysis to look ahead to 1965 and 1970, therefore, the range of possibilities is fairly wide : they are set out in table 6. Real disposable income may rise faster or more slowly than in the past[2] ; the income-stock elasticity may be higher or lower than the value of 2.4 found for 1948-1960—that is, the rise in car stock may be more or less than 2½ times the rise in income ; and the time trend may continue as in the past, or it may be lower—it is hardly likely to be higher. The central assumptions—that income will rise as in the past and that the income-stock elasticity will not change—suggests a rise in car stock between 1960 and 1965 of 48-59 per cent and from 1960 to 1970 of 118-153 per cent (table 6). These assumptions are illustrated in chart 1, page 17.

From the forecasts of car stock figures can be obtained for the likely number of new cars purchased in 1965 and 1970 (as in table 2, page 16). Part of new purchases will simply be the change in forecast stock levels for successive years ; the rest will be replacement demand. These forecasts require some assumptions both about the size composition of new cars and about depreciation rates.

The size of car

The main post-war trend has been the steady fall in the proportion of large cars from 44 per cent of

Table 7. The size composition of new registrations, 1948-1960

Year	*Total cars (Thousands)*	Percentage distribution		
		Small	Medium	Large
1948	*111*	44	23	33
1950	*132*	30	25	44
1952	*188*	37	28	35
1954	*386*	51	27	22
1956	*400*	51	28	21
1958	*555*	45	39	16
1960	*805*	53	33	14
1961 (1st half) ..	*830*[a]	55	32	13

Source : Ministry of Transport.

Note : Registrations are for Great Britain and include a small number of used cars registered as passenger cars for the first time. 'Small' includes cars with engine capacity less than 1,200 c.c. ; 'medium' includes cars from 1,200-1,800 c.c. ; and 'large' includes cars greater than 1,800 c.c.

(a) First half-year, seasonally adjusted, at an annual rate.

[1] This analysis of pre-war figures was not precisely comparable with the one using post-war figures, since it was not possible to take account of the differences in the size of cars (Appendix II).

[2] From 1947 to 1960, real disposable income per head rose 2.3 per cent a year ; population rose about 0.47 per cent a year.

total new registrations in 1950 to 13 per cent in 1961 (table 7). Small cars, which were a third of total registrations, now have over half the market, and medium-sized cars increased their share from a quarter to about a third. But in the last two years the share of small cars has been rising at the expense of medium-sized cars as well.

Since the forecast is made in terms of car stock, a shift towards smaller cars would, other things being equal, raise the number of cars bought. The forecast set out below assumes that the distribution of car purchases between the three car sizes remains as it is in 1961. If there were a further shift towards small cars, so that they provided 65 per cent of new registrations, this would raise all the figures of demand for new cars in table 8 by 8 per cent.[1]

Table 8. Projected new registrations of cars in Great Britain in 1965 and 1970

Thousands

	1960	1965	1970	
			A	B
Assumption 1. Real disposable income per head 2½ per cent a year ; income-stock elasticity 2.4 ; time trend of 3 per cent a year 1960–1965, and 1½ per cent a year 1965–1970.				
Cars in use	5,526	8,750	13,500	12,500
New purchases	**805**	**1,090**	**1,615**	**1,840**
of which :				
Investment	421	465	690	690
Replacement	384	625	925	1,150
Share of replacement (per cent)	*48*	*57*	*57*	*62*
Assumption 2. Real disposable income per head 2½ per cent a year ; income-stock elasticity 2.4 ; time trend of 3 per cent a year throughout.				
Cars in use	5,526	8,750	14,000	13,000
New purchases	805	1,090	1,740	1,980
of which :				
Investment	421	465	745	745
Replacement	384	625	995	1,235
Share of replacement (per cent)	*48*	*57*	*57*	*62*
Assumption 3. Real disposable income per head 1½ per cent a year ; income-stock elasticity 2.4 ; time trend of 3 per cent a year 1960–1965, and 1½ per cent a year 1965–1970.				
New purchases	805	875	1,150	1,330
Assumption 4. Real disposable income per head 3½ per cent a year ; income-stock elasticity 2.4 ; time trend of 3 per cent a year 1960–1965, and 1½ per cent a year 1965–1970.				
New purchases	805	1,340	2,225	2,500

Source : Appendix II. For 1970 projection ' A ' assumes the replacement rate remains unchanged at 12 per cent of car stock ; projection ' B ' allows for a rise to 15 per cent of car stock.

Depreciation rates

To the figures of the additions to the car stock (which in table 8 are converted into figures of actual numbers of cars) a replacement demand figure must be added. The higher depreciation rates are, the more cars will be scrapped, and consequently replacement demand will be higher as well.[2] (According to the analysis used here, of course, the scrapping of 5 ten year-old small cars will increase demand for new small cars by only 2.)

Since the war, depreciation rates and scrapping rates have been lower than they were before it. From 1948 to 1960, for all sizes of cars together, replacement demand (which takes account of both depreciation and scrapping) has been some 10-12 per cent of the car stock. If it returns to the pre-war level, this proportion, because of higher scrapping, might rise to 15 per cent. In table 8, figures are given which show the implications of different assumptions about time trends and about the rates at which real incomes rise. They also show the effect for 1970 of assuming a replacement rate of 15 per cent.[3]

If one single set of assumptions has to be selected, perhaps the most plausible is that the higher time trend persists up to 1965 and the lower one from 1965 to 1970, and that the replacement rate in 1970 will be back to the pre-war figure. On these central assumptions, new home demand for cars in 1965 would be around 1.1 million, and in 1970 around 1.8 million. These central assumptions are shown in chart 7, which also compares actual registrations and those calculated by the model used in this article for the years 1948-1960.

Home deliveries of the British car industry, however, will be lower than this, because of imports. In the second part of this article, it is assumed—given that Britain joins the Common Market—that 15 per cent of home demand will be met by imports in 1965, and 30 per cent in 1970. This implies British deliveries

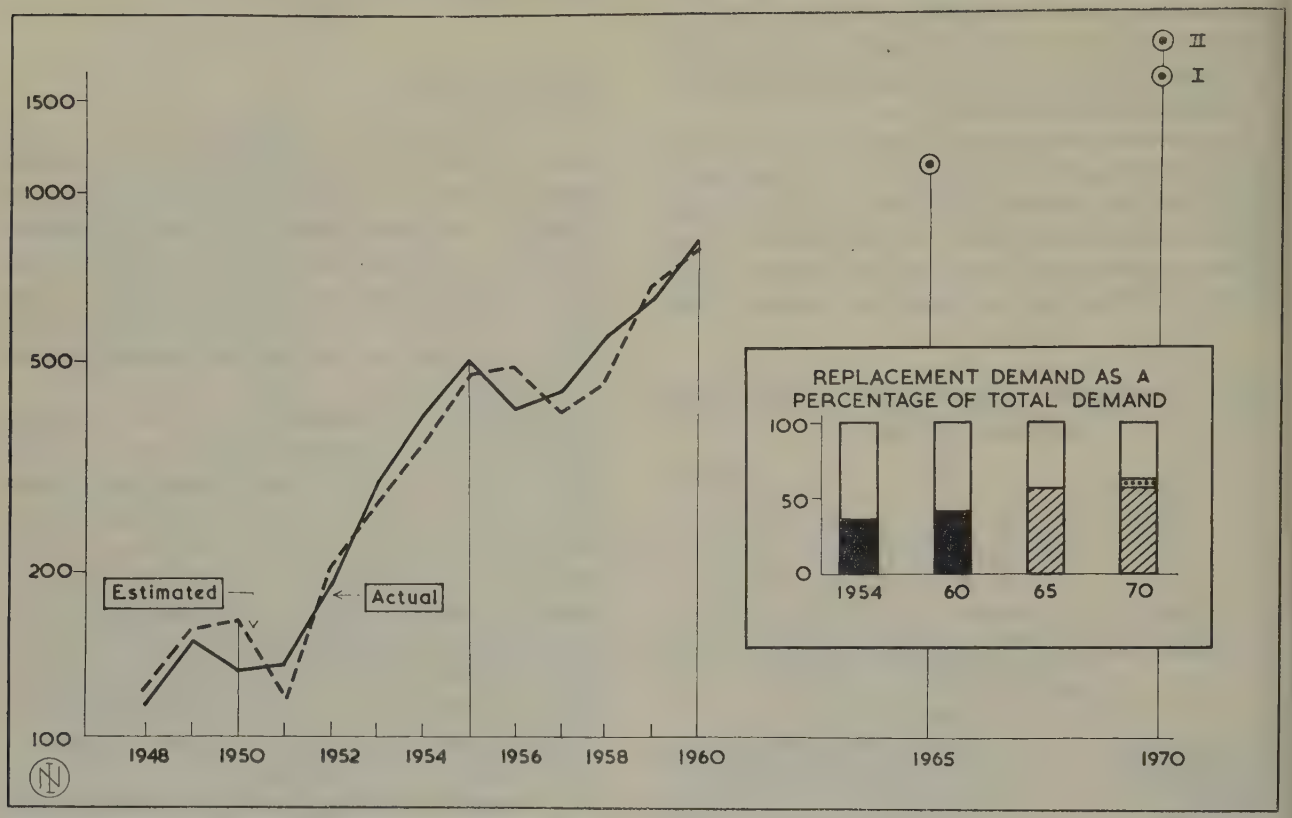
[1] This calculation also assumes that medium cars would provide 30 per cent of new registrations and large cars 5 per cent.

[2] For a full explanation of depreciation rates, scrapping rates and replacement demand, see Appendix II.

[3] The assumption of a higher replacement rate reduces slightly the very tentative estimates of car park. For the projections on which these figures are based were made originally in terms of the car stock which consumers will wish to hold. A higher depreciation rate implies that consumers' preferences have shifted away from older cars ; to the extent that this occurs, consumers will be opting for a car stock made up of newer and fewer cars than on the hypothesis of a similar stock in 1970, but a lower depreciation rate.

Chart 7. New registrations in Great Britain : actual and estimated figures, 1948-1960, and projected figures, 1965 and 1970

Thousand cars, single logarithmic scale



Source : Appendix II.

Note : The projections shown are those of the ' central assumptions ' described in the text and shown in bold type in table 8. Assumption I for 1970 assumes no increase in replacement rates : assumption II assumes an increase.

to the home market of about 900-950 thousand in 1965 and 1¼ million in 1970.[1]

II. PROSPECTS FOR EXPORT DEMAND

Introduction

To the forecast for home demand must be added the prospects for export demand.[2] This section therefore looks first at possible world trends in car ownership. By making estimates of replacement demand, figures can then be derived for each region showing the possible total demand for new cars in 1965 and 1970. Necessarily, the estimates are made in a more rough-and-ready way than the estimates for Britain ; in particular, the concept of car stock has only been used for the United States and Canada, since for other countries the figures are inadequate.

Only part of the total demand would be met by imports, and the size of this part will probably change. Further, only part of these imports will come from Britain, and Britain's share has recently been declining.

For a projection of this kind, the assumptions are all-important. One assumption is the growth of real income in other countries, and the figures chosen may well be disputed. An assumption raising even more difficult issues is the possible change in the British share of overseas markets. This will depend, amongst other things, on whether Britain joins the Common Market—in this analysis it is assumed that she does—and the effects this may have on tariff levels, preferences and competitiveness. The assumptions made here are not purely an extrapolation of past tendencies ; this would produce a less favourable result. Nor do they allow for the greatest possible increase in competitiveness ; but they do allow, in Western Europe, for a moderate reversal of Britain's declining share.

World ownership of cars

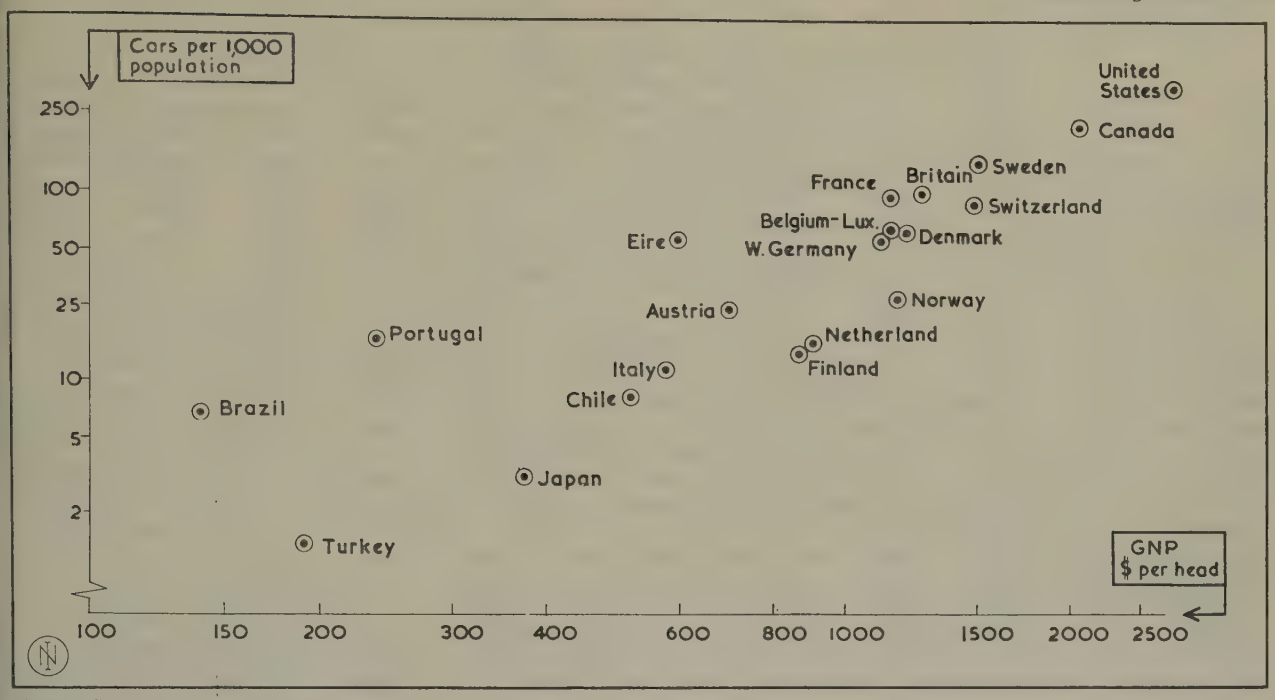
The total number of cars in use throughout the world probably passed the 100 million mark during

[1] The figure for 1965 is rather higher than that given in *Development in the Iron and Steel Industry*, 1961, Iron & Steel Board, paras. 78-81 ; this shows 860 thousand deliveries to the home market in 1965. The report comments that this figure is ' greater than the average suggested by the motor industry '.

[2] Throughout this section exports of cars include chassis.

Chart 8. Car ownership related to income in certain countries in 1959

Double logarithmic scale



Source : See sources for tables 9 and 10.

1961—an increase of a half since 1954. There is now approximately one car for every thirty people in the world—though of course the distribution is immensely uneven, with about 70 per cent of them in North America.

In the long run, car ownership seems to vary between countries more or less in line with income ; the relative level of income per head in 1959, for instance, seems to provide a fairly good explanation of the relative level of car ownership (chart 8).[1] But in the short run, the relationship is much less direct. For instance, between 1954 and 1960 the number of cars in use rose 26 per cent in the United States and about 400 per cent in Austria : the difference in the rates at which income rose in the two countries certainly does not account for this. Some of the other factors have already been discussed in the explanation of experience in Britain (page 21). There is the 'learning'[2] effect in countries where ownership was relatively low—this was true of Austria in 1954 (table 9) ; there was the disappearance of the supply scarcity of the early post-war years ; there is also the effect of relative car prices. In Sweden, for instance, car ownership has risen fast in spite of a fairly slow rise in incomes : this may be partly because the cost of a car in Sweden, in terms of the average wage, is relatively low among European countries.

The evidence has already been put forward (page 18) for the conclusion that any 'saturation effect' is unlikely in Britain between now and 1970 ; the arguments hold good for most other countries as well : certainly the chart which compares ownership with income in 1959 (chart 8) shows no tendency for a flattening in the line at the top. It is true that Canada and the United States have recently shown very slow increases in ownership ; but other countries are so far away from their ownership level (when account is taken of the size of cars as well as of their numbers) that there is no reason to qualify the forecast made for other countries because of United States or Canadian experience.

Forecasts of world demand

Forecasts set out in table 10 are of three kinds. For the United States, Canada and Japan, other people's calculations have been used. For Western Europe the estimates are based on past income-ownership elasticities and on a time trend. For the rest of the world, the rate of rise in ownership in recent years—which has been fairly regular—has been projected into the future. These forecasts of world ownership are, if anything, on the high side.

An analysis has been made of United States car demand[3] using similar methods to those employed

[1] See also chart 4, page 17, 'Trends in World Trade in Durable Consumer Goods', A. Maizels, *National Institute Economic Review*, no. 6, November 1959 ; this chart shows rather more countries, for the years 1955-1957.

[2] See L. Needleman, 'The Demand for Domestic Appliances', *National Institute Economic Review*, no. 12, November 1960, page 29.

[3] G. C. Chow, reference given in footnote [1], page 20.

Table 9. Cars in use : World figures

	Persons per car			Cars in use							
				Index numbers (1954=100)				*Thousand cars*			
	1938	1954	1959	1956	1958	1959	1960	1954	1959	*1965*	*1970*
United Kingdom ..	25	16	10	126	147	160	178	3,173	5,081	*8,750*	*12,500*
United States	5	3	3	112	117	123	126	48,499	59,567	*72,500*	*82,500*
Canada	10	6	5	118	133	142	149	2,680	3,795	*5,500*	*7,000*
Belgium-Luxemburg ..	57	20	13	122	146	162	178	459	743		
France	23	16	9	130	169	188	208	2,667	5,018		
West Germany	54	39	16	152	223	269	326	1,259	3,391		
Italy	149	69	30	149	201	238	289	691	1,644		
Netherlands	92	48	25	149	191	205	231	219	450		
EEC	50	30	15	138	185	212	246	5,295	11,246		
Austria	211	89	21	241	367	437	518	78	341	*30,000*	*53,000*
Denmark	35	23	13	129	161	183	208	193	353		
Norway	54	36	19	141	181	196	237	95	186		
Portugal	214	96	61	127	154	174	187	85	148		
Sweden	40	14	7	141	189	201	224	514	1,033		
Switzerland	56	20	12	134	169	189	214	238	450		
EFTA (excl. UK) ..	68	30	15	143	189	209	237	1,203	2,511		
Australia..	13	7	5	119	136	146	..	1,283	1,877		
New Zealand	8	6	5	120	137	143	..	350	501		
South Africa	34	23	17	110	140	146	..	586	854		
Irish Republic	55	24	18	114	120	128	..	123	158		
Other sterling area ..	..	..	..	119	142	157	..	617	966		
Overseas sterling area ..	..	..	..	117	137	147	..	2,959	4,356	*7,500*	*12,000*
Japan	1,450	654	315	117	168	219	294	134	294	*1,100*	*2,250*
Argentina	68	56	51	105	114	124	..	323	401		
Brazil	391	143	150	102	109	117	..	368	430		
Mexico	259	115	83	112	140	160	..	250	400	*8,650*	*13,750*
Venezuela	234	44	27	150	168	199	..	120	239		
Eastern Europe	..	517	317	115	140	166	..	581	962		
Other	..	..	..	128	147	159	..	1,615	2,568		
All countries	62	39	32	116	128	137	*144*	67,200	91,850	*134,000*	*183,000*

Source : Society of Motor Manufacturers and Traders, EEC *General Bulletin of Statistics*, UN *Statistical Yearbooks* and *Monthly Bulletins of Statistics*, *OEEC General Statistics* and *Industrial Statistics*, *Japanese Economic Statistics*. For some countries, the figures vary slightly according to the source used.

for Britain in this article ; this analysis shows, for the years 1921-1957, an income-stock elasticity of 1½-2—that is, the stock of cars tended to rise 1½-2 times as fast as income. This analysis has been employed for the projections, with the assumption that real disposable income per head in the United States will rise at the rate of 2 per cent a year. The same method was employed for Canadian demand : the American relationships were used throughout. This suggests a rise in the total car park in North America of about 3 per cent a year in the next decade.

For Western Europe, a comparison of national product and car ownership from 1954 to 1959 suggested an income-ownership elasticity of 2½, together with a time trend of 5 per cent a year. (This comparison differs from those used for Britain or the United States, since it was in terms of car ownership, or park, and not depreciated car stock.) For the

Table 10. Past and prospective world supply and demand for cars (excluding Britain)

Thousand cars, annual rates

	1954–1955	1956–1957	1958–1959	1960	1961 1st half	*1965*	*1970*
United States & Canada							
Increase in cars in use	3,058	2,086	2,044	1,909	..	*2,500*	*2,500*
Increase in US dealers' stocks[a]	108	−5	−75	423	168	—	—
Scrapping, etc.[b]	3,782	4,332	3,809	5,188	..	*6,550*	*8,350*
Total supply	**6,948**	**6,413**	**5,778**	**7,520**	**6,070**	*9,050*	*10,850*
of which							
Unexported production	6,855	6,147	5,098	6,885	5,705	*8,400*	*10,150*
Imports[c]	93	266	680	635	365	*650*	*700*
of which Imports from UK	38	91	239	223	65	*160*	*175*
EEC and EFTA[d]							
Increase in cars in use	1,268	1,448	1,634	2,104	..	*3,600*	*5,700*
Scrapping, etc.[b]	78	295	626	825	..	*1,300*	*2,150*
Total supply	**1,346**	**1,743**	**2,260**	**2,929**	**3,290**	*4,900*	*7,850*
of which							
Unexported production	927	1,259	1,617	2,071	2,270	*3,150*	*4,350*
Imports[c]	419	484	643	858	1,020	*1,750*	*3,500*
of which Imports from UK	85	76	73	93	98	*220*	*525*
Overseas sterling area							
Increase in cars in use	269	274	292	..	..	*700*	*1,000*
Scrapping, etc.[b]	80	88	147	..	..	*300*	*450*
Total supply	**349**	**362**	**439**	**543**	..	*1,000*	*1,450*
of which							
Unexported production	45	65	105	125	..	*300*	*450*
Imports[c]	304	297	334	418	370	*700*	*1,000*
of which Imports from UK	231	185	181	212	153	*245*	*300*
Other countries							
Increase in cars in use	187	305	505	..	..	*1,000*	*1,600*
Scrapping, etc.[b]	195	139	174	..	..	*350*	*650*
Total supply	**382**	**444**	**679**	**986**	..	*1,350*	*2,250*
of which							
Unexported production	140	176	340	586	..	*950*	*1,700*
Imports[c]	242	268	339	400	390	*400*	*550*
of which Imports from UK	26	28	33	42	42	*50*	*50*
All countries[d]							
Increase in cars in use	4,782	4,113	4,475	5,200	..	*7,800*	*10,800*
Increase in US dealers' stocks[a]	108	−5	−75	423	168	—	—
Scrapping, etc.[b]	4,135	4,854	4,756	6,355	..	*8,500*	*11,600*
Total supply	**9,025**	**8,962**	**9,156**	**11,978**	**11,025**	*16,300*	*22,400*
of which							
Unexported production	7,967	7,647	7,160	9,667	8,880	*12,800*	*16,650*
Imports[c]	1,058	1,315	1,996	2,311	2,145	*3,500*	*5,750*
of which Imports from UK	380	380	526	570	358	*675*	*1,050*

Source : Society of Motor Manufacturers and Traders, *American Automobile*, *Global Automotive Survey and World Motor Census*, *Ward's Automotive Reports* and *Yearbooks*, *EEC General Bulletin of Statistics*, *OEEC General Statistics* and *Industrial Statistics*, INSEE *Bulletin Mensuel de Statistique*, Japanese Economic Statistics, official trade statistics of United States, Germany, Italy, Sweden and Japan.

(a) Stocks of new US cars only.
(b) Differences between the increase in the number of cars in use and the total supply as measured by the sum of domestic production, less exports, and other countries' exports to the country in question are due to scrapping and stock changes. The item ' scrapping etc.' includes all stock changes except for dealers' stocks of new cars in the United States. It may also include timing differences, for example where the figures for cars in use are not on a strict calendar year basis, and any errors in the other items, which, particularly for the first half of 1961, are partly estimated.
(c) Includes intra-trade ; the figures are based on export, not import data.
(d) Excludes United Kingdom.

future, it was assumed that the income-ownership elasticity would hold good. The time trend was gradually reduced, as in the British projection—and for the same reasons ; it was assumed that it was high in the early years because there had been some scarcity on the supply side, a scarcity which has now disappeared. Finally it was assumed that national product in EEC and Continental EFTA countries would rise at 4 per cent a year—rather less than the 1954-1959 rate of 4½ per cent.[1] The forecast implies that in these countries the car park will rise in the next decade by some 12-13 per cent a year, and that by 1970 there will be about 4 persons per car. This would still be appreciably lower than the present level of ownership in the United States, particularly if we take into account the difference in size of car ; it would be about the same level of ownership as in Britain—perhaps, if anything, slightly higher.

For Japan, the official 1970 plan was taken.[2] The Japanese Government is planning for a car population of about 2¼ million in 1970. This implies an average rate of increase of nearly 20 per cent a year, compared with about 35 per cent for each of the last two years. In dividing this increase between the two quinquennia, it has been assumed that the rate of growth will be faster in the first than in the second : a 25 per cent annual increase from 1960 to 1965, and a 15 per cent increase thereafter.

For a large part of the rest of the world, income figures are, by and large, unreliable : in any case, relationships with incomes are likely to be erratic in those countries where imports are governed by balance of payments considerations. Further, at very low levels of ownership it is difficult to establish a direct connection with income. In the overseas sterling area the number of cars in use has been rising fairly steadily by about 8 or 9 per cent a year. As local manufacture is stepped up in the next decade, the damping effect of import restrictions may be slightly less ; a figure of 10 per cent is assumed for the future. Car ownership in the rest of the world has been rising at an average of about 10 per cent a year for some years now, and it is assumed that it continues to do so.

The figures of ownership for all regions, taken together, imply a car park of 134 million in 1965 and 183 million in 1970, increases of about 40 and 90 per cent on the 1960 total. To obtain the figures of total demand for new cars in 1965-1970, some estimates of scrapping have to be added to the figures of the increase in the car park.

To make this calculation, it was assumed that the average life of a car would shorten somewhat between now and 1970. (A similar assumption was made for Britain (page 23)—that the replacement rate would rise in the next decade.) At the moment, in many countries, the average life of a car is a good deal longer than it was before the war ; the calculation assumes that this life will shorten, but will still probably stay rather longer than it was pre-war.[3]

The market for exports

Only a small part of the total demand for new cars will be met by exports ; and in translating this increase into the demand for exports, there are two conflicting considerations. First, and more important, the spread of free trade in cars in Western Europe is virtually certain to lead to a considerable increase in intra-trade.

Domestic markets in the big producing countries have hitherto been protected by import quotas and by high tariffs (footnote 2, page 31). Imports have been little more than 5 per cent of registrations in recent years, except in West Germany, where they have been inflated by duty-free sales to British and American forces. Import quotas in the big producing countries will have entirely disappeared by the end of 1961 ; this, with the impending reductions in tariff barriers, is certain to mean a rise in these import percentages.

On the other hand, there is a growing number of countries in which new car industries are springing up, or in which small industries are rapidly expanding. In some of them, such as the USSR and Japan, increased production for their own home markets will hardly affect the exports of the old-established car producing countries directly ; for the USSR and Japan have never been good export markets. But increasing output in other new producing countries—such as Australia, Spain, Brazil and Argentina—will replace imports. Home production in Australia, for example, which was only 28 per cent of new registrations in 1954, had reached 42 per cent by 1960. The same kind of trend may soon begin in other countries, such as India.

In table 11, some illustrative percentages are put in for the share of total demand for new cars in four main regions which may be met by imports from other countries—including intra-trade within the regions. These percentages are put in as illustrations

[1] D. C. Paige, 'Economic Growth : the Last Hundred Years', *National Institute Economic Review*, no. 16, July 1961.

[2] 'New Long-range Economic Plan for Japan (1961-1970)', *Japan Times*.

[3] For 1970, it was assumed that cars about 12 years old would be being scrapped, and that in that year scrapping would be equal to one-ninth of the cars registered in 1956 and 1960, two-ninths of the cars registered in 1957 and 1959, and one-third of the cars registered in 1958. (Pre-war calculations, in the *Society of Motor Manufacturers and Traders Yearbook* 1939, suggested that the average life of a car in Britain in 1937-8 was slightly more than eight years.) It was assumed that the number of cars scrapped in each region would rise evenly from now until 1970.

Table 11. Share of imports in total world demand, and share of imports from UK in total imports, by region

Percentage of number of cars

	1954–1955	1956–1957	1958–1959	1960	1961 1st half	*1965*	*1970*
Share of total demand met by imports[a]							
United States & Canada	1.3	4.1	11.8	8.4	6	*7*	*7*
EEC & EFTA[b]	31.1	27.8	28.5	29.3	31	*35*	*45*
Overseas sterling area	87.1	82.0	76.1	77.0	..	*70*	*70*
Other countries[b]	63.4	60.4	50.0	41.6	..	*30*	*25*
All countries[a][b]	**11.7**	**14.7**	**21.8**	**19.3**	**19½**	*21*	*26*
Britain's share in total imports into market							
United States & Canada	40.9	34.2	35.1	35.1	17½	*25*	*25*
EEC & EFTA[b]	20.3	15.7	11.4	10.8	9½	*12½*	*15*
Overseas sterling area	76.0	62.3	54.2	50.7	41½	*35*	*30*
Other countries[b]	10.7	10.4	9.7	10.5	10½	*12*	*9*
All countries[b]	**35.9**	**28.9**	**26.4**	**24.7**	**16½**	*19*	*18*

Source : Table 10.

(a) Includes intra-trade.
(b) Excludes UK.

of what might happen and as indications of the direction in which things might go rather than as forecasts.

In *North America*, it is unlikely that imports will in fact recover their 1958-1959 share of 12 per cent. The circumstances in the United States were then special ones ; the new compact cars have since been introduced, and there is little doubt that a smaller American car will soon be on the market as well which will compete with cars like the Volkswagen or the Mini-Minor. Stocks of imported cars were reduced in the first half of 1961 ; for this reason the import percentage may recover a little, but probably not much, from what it was then. In *Western Europe*—that is, EEC and EFTA countries excluding Britain—it is assumed that, with the spread of free trade in the area, the number of producing countries will not increase, and that in the big producing countries imports will provide something like a seventh of the market in 1965 and a quarter in 1970 (page 31). In the *overseas sterling area* it is assumed that the proportion of cars imported will not fall much : this implies that if any new industries are established—in India or South Africa, for example—they will not have grown to a substantial size by 1970. Finally, in the *rest of the world*, the main reasons for the very sharp fall in the share of imports in total demand are the rising importance of Japanese production and of Latin American production for the home market. The net effect of all these changes is, in fact, to leave the total proportion of world demand met by imports in 1965 much as it was in 1960 ; but, because of the expected increase in intra-trade in Europe, there is a rise in this proportion in 1970.

Britain's share in export markets

If Britain successfully held her 1960 share in the total car imports assumed for each of these main regions, her exports of cars would be about 800 thousand in 1965 and 1,200 thousand in 1970. But in the light of her falling share in world markets in the past five years, and particularly in the first half of 1961, it seems improbable that British industry will, in fact, maintain this share.

Implications of the Common Market

If Britain joins the Common Market, in the long run the changes in the pattern of her trade in cars—and indeed in her car industry as a whole—could be considerable. Logically, if consumers became completely indifferent as between cars made in their own country and cars made elsewhere, and if the industries in all four major producing countries in Western Europe were of about equal size and equally competitive, three-quarters of the demand in each producing country would be met by imports. If the Common Market is successful, competition will probably be much more between firms than between countries.

Table 12. Registrations of British, French, German and Italian cars in certain neutral markets

	1959 total (000 cars)	Percentage shares						
		1954	1955	1956	1957	1958	1959	1960
Belgium								
United Kingdom	*9.3*	..	17.5	17.1	15.7	12.2	10.2	..
France	*32.5*	..	26.3	26.0	26.6	29.6	35.6	..
West Germany	*44.6*	..	51.9	52.2	51.3	51.8	48.9	..
Italy	*4.8*	..	4.2	4.7	6.4	6.3	5.3	..
Total for above countries	*91.2*							
Netherlands								
United Kingdom	*10.7*	26.9	23.1	18.3	19.4	14.6	13.9	15.2
France	*21.1*	13.0	19.0	15.8	15.9	18.1	27.3	27.1
West Germany	*41.2*	56.0	57.8	58.9	56.6	60.5	53.3	50.5
Italy	*4.3*	4.1	.1	7.1	8.1	6.8	5.6	7.3
Total for above countries	*77.3*							
Portugal								
United Kingdom	*2.6*	23.9	18.1	17.7	16.3	13.6	14.7	15.4
France	*3.8*	9.7	13.3	16.1	16.9	18.7	21.7	19.8
West Germany	*8.7*	56.9	60.7	53.5	54.1	54.0	49.2	53.6
Italy	*2.6*	9.6	8.0	12.7	12.7	13.8	14.4	11.1
Total for above countries	*17.7*							
Sweden		(a)		(a)	(a)			
United Kingdom	*20.0*	*44*	..	*21*	*20½*	19.8	17.2	13.3
France	*11.9*	*10*	..	*8*	*9*	10.1	10.2	9.0
West Germany	*81.0*	*39*	..	*67*	*67*	66.8	69.7	75.1
Italy	*3.4*	*7*	..	*4*	*3½*	3.3	3.0	2.7
Total for above countries	*116.3*							
Switzerland								
United Kingdom	*5.9*	12.6	12.8	11.4	10.1	8.7	8.8	..
France	*17.3*	12.8	13.8	18.1	20.1	21.7	26.0	..
West Germany	*36.7*	62.8	60.7	59.2	59.4	60.0	55.1	..
Italy	*6.7*	11.8	12.7	11.4	10.5	9.6	10.0	..
Total for above countries	*66.6*							

Source : Society of Motor Manufacturers and Traders, *Annuaire Statistique de la Belgique et du Congo Belge, Statistische Jahrbuch der Schweiz, Economic Review* of the British-Swedish Chamber of Commerce in Sweden.

(a) Figures in italics are approximate.

By 1965, however, any such process of integration would not have got very far, and by 1970 it would probably still have a good way to go. This section, therefore, looks mainly at the immediate effects of joining the Common Market, and makes no assumptions about major long-term structural changes in the European car industry as a whole.

First of all, if Britain joined, she would presumably lose part of her preference in sterling area markets : and in a number of these markets—New Zealand is the chief example—this preference is still important for car exports. Clearly the preference in the Irish Republic of 15 per cent over other car producers except Canada would be lost ; for the Irish Republic is also a candidate for membership and will presumably join the Common Market if Britain does. Reciprocal reductions in preferences might be negotiated in the associated territories of the present Six, but the Commonwealth markets are by far the bigger. Australia alone imported more cars in 1960 than all the associated territories of existing EEC members even if Algeria is included.

Secondly, if Britain joined, Benelux and the EFTA countries would become neutral markets once more, as they were before EEC and EFTA were established. But under the EFTA arrangements British manufacturers would have had the great advantage of being the only major producers in the area (since Swedish output is still relatively small). Within the Common Market they would have to share this privileged position with three more competitors in return for the right to continued access on an equal footing to the markets in Belgium and the Netherlands (itself a small producer). The change is clearly

disadvantageous on balance, particularly as the EFTA market is the bigger. In 1960 total exports to EFTA countries other than the United Kingdom amounted to 408 thousand cars, whereas only 263 thousand cars were exported to the Benelux countries.

Within the Common Market all these countries would become neutral as between the four big European manufacturing countries ; and Britain's experience in neutral markets in recent years has not been encouraging. In none of the five neutral markets for which figures are given in table 12 have registrations[1] of British cars kept pace with those of cars produced by the other three big producers. In 1954 Britain's share of their combined registrations ranged from about 45 per cent in Sweden to 15 per cent in Switzerland. By 1960 it was little more than 15 per cent in any of these markets and had fallen to less than 10 per cent in Switzerland. The particularly big fall in Sweden, which seems to have accelerated in 1961, may have occurred in part because rapid gains by the Swedish cars (particularly the Volvo) have been at the expense of the main range of British (and French) models rather than of the smaller Volkswagen. But even in the other four countries, where the gains have gone very largely to France, Britain's share has fallen in five years or so by something between a third and a half.

It is true that in a Common Market the British car industry would gain from the opening up of the French, German and Italian markets. But Britain's export gains here must logically be considered together with the probable loss of part of her own home market (see page 34). Britain's effective protection of cars (including the effect of indirect taxes) is higher than that of the other three countries (about 45 per cent compared with something like 20 per cent in Germany, 35 per cent in France and 40 per cent in Italy).[2] This fact, taken together with the lack of competitiveness suggested by Britain's record so far in neutral markets, leads to the conclusion that in trade in cars with France, Germany and Italy Britain's immediate losses in her home market might well be greater than her immediate export gains.

The immediate effect of joining the Common Market, therefore, would almost certainly be to reduce Britain's share in the world market for cars from what it would otherwise have been. But in the longer run it seems reasonable to assume that the British industry would take steps to become more competitive in Europe. Hitherto, British manufacturers have concentrated mainly on building up dealer networks first in sterling area countries and then in the United States ; they have tended to leave Western Europe to their Continental competitors, and in 1960 held only 11 per cent of Continental EEC and EFTA's imports of cars. If Britain joined the Common Market they would almost certainly take this market more seriously, and would probably succeed in increasing their share to one more commensurate with the size of the British industry. In table 10 it is assumed that the British industry's percentage of Continental Western Europe's imports of cars rises to 12½ per cent in 1965 and 15 per cent in 1970.

The United States market

The expansion and contraction of the United States market since 1954 distorts the picture of British car exports. They rose, in total, to all destinations from about 380 thousand to 570 thousand cars a year between 1954-55 and 1960. Nearly the whole of the increase was in exports to North America : exports to the rest of the world stayed stagnant. It appears that in North America Britain came early into a rapidly growing market for a product which the home industry did not supply. Two things have happened since then : American industry is now beginning to supply it, and other European competitors have to a large extent supplanted Britain.

Exporting countries' shares in the North American market have changed dramatically since 1954 (table 13) ; some of the changes are explained by the marketing arrangements of Ford and General Motors. In 1958 and 1959 a greatly increased share of the United States market was captured not only by imported cars but also by the first of the American ' compacts ', the American Motors Rambler and the Studebaker Lark. The big three (General Motors, Ford and Chrysler) had then no small car of their own and imports from their overseas subsidiaries were stepped up. Ford (UK)'s exports to the United States increased tenfold between 1956 and 1959 and Vauxhall, which had not been exporting cars there until the autumn of 1957, exported over 17 thousand cars in the following year. The introduction of the big three's own compacts towards the end of 1959

[1] Export figures, though more readily available, are an unreliable guide because cars exported for assembly in one country may ultimately find their way to another.

[2] This is the difference between the price of the home-produced and the imported car, including the effect of duty and purchase-tax, expressed as a percentage of the price excluding both. In Britain there is a tariff of 30 per cent and purchase tax of 55 per cent (including the new surcharge). In France there is a tariff of 29 per cent and an added value tax of 25 per cent, payable also on French cars, calculated on the duty paid value. In West Germany the tariff is 20.7 per cent for cars with a cylinder capacity of more than 2,000 c.c. and 16.9 per cent for the rest, and there is a turnover equalisation tax of 6 per cent of the duty paid value. In Italy the tariff ranges from 38.4 per cent on the smaller cars to 31.4 per cent on the biggest. There is also an administration fee of 1 per cent of the c.i.f. value, a turnover equalisation tax of 8 per cent of the gross landed value, and a general turnover tax of 3.3 per cent levied on the gross landed value and again on the invoice value at each subsequent change of ownership. (On the exports of other EEC countries the tariffs are, of course, lower—particularly in France.)

Table 13. Exports of cars to the United States and Canada

Percentage shares

	1954	1955	1956	1957	1958	1959	1960	1961(a) 1st half
To United States								
United Kingdom	70	32	34	35	35	31	28	5
France..	4	6	8	17	23	27	18	10
West Germany	26	62	54	39	30	30	46	81
Italy	—	1	1	5	7	7	3	1
Sweden	—	—	3	4	4	4	5	3
Total—thousand cars	*38*	*62*	*112*	*271*	*434*	*665*	*470*	*124*
To Canada								
United Kingdom	44	29	27	40	44	46	56	45
United States	48	57	50	23	17	16	16	14
France..	—	—	—	1	8	11	6	7
West Germany	8	14	23	36	29	25	21	33
Italy and Sweden	—	—	—	—	2	2	1	1
Total—thousand cars	*38*	*48*	*77*	*72*	*104*	*158*	*165*	*58*

Source : Society of Motor Manufacturers and Traders, INSEE *Bulletin Mensuel de Statistique*, official trade statistics of United States, Germany, Italy, and Sweden.

(a) Provisional.

changed the situation, and registrations of imported cars fell by a fifth in 1960. The ' captive makes ' were particularly hard hit. Sports and luxury cars and small cars other than the Fiat fared considerably better. But the most striking success among the leading makes was that of the Volkswagen, which increased its registrations by a third.

In the first half of 1961 the Volkswagen's performance has been equally impressive. Registrations of all imported cars fell by nearly a third—to about 190 thousand, compared with 270 thousand in the first half of 1960. But Volkswagen registrations were up by 10 per cent and accounted for 47 per cent of the total. Registration of British cars fell sharply. The four best-sellers, Ford, Triumph, Austin-Healey and Metropolitan, accounted for about 20 thousand registrations compared with about 55 thousand in the first half of 1960 ; but there must have been bigger losses for other makes, notably Hillman and Vauxhall.[1] Even so, it is quite clear that the British export figure of only 6 thousand cars, compared with about 100 thousand for Germany, is misleading. There must have been reductions in the stocks of British cars which were accumulating at this time last year.

American compact cars have continued to increase their share of the market. In 1959 imported cars and compact cars each had about 10 per cent of the market. By June 1961, compact cars provided about 37 per cent of total sales, and imported cars 7 per cent. Further there is the prospect of an American small car. Ford's have announced plans for the ' Cardinal ' to compete with the Volkswagen ; it is reported that the parts will be made in Ford factories in England and Germany and the car will be assembled in America for the American market. It seems likely, therefore, that imports of complete cars may be increasingly confined to specialised types of car—in particular sports and luxury cars. Britain may succeed in expanding sales of these cars and may be less severely affected than the Continental exporters for this reason. The British share in exports to the United States market seems certain to recover from the very low figure in the first half of 1961 (table 13) ; but, since imports in total will probably stay a much smaller proportion of American demand than in 1958-1959, there seems little chance that British exports of cars to the United States will recover their 1958-1959 level.

There has not been the same boom in imported cars in Canada ; nor has there been the same catastrophic fall in Britain's share (table 13). Changes in the marketing arrangements of Ford and General Motors probably account for most of Britain's big gains between 1956 and 1957. But, as in the United States, competition from the compact cars, produced by American firms and their Canadian subsidiaries, is reducing the share of European makes in the Canadian market ; they had 27 per cent of the market in the first half of 1960, and only 22 per cent in the first half of 1961. The fall was also partly due to a

[1] Figures from Ward's Automotive Reports and R. L. Polk and Co.

less favourable method of valuing imports for tax and duty purposes. British manufacturers are also threatened with other difficulties. Anxiety about the Canadian balance of payments may lead to a greater protection for the home industry beyond that already afforded by the recent depreciation of the Canadian dollar. Such measures would probably be mainly at the expense of Britain, which at present enjoys duty-free entry but is threatened with the imposition of a 10 per cent tariff. (The most favoured nation rate is 17½ per cent.) If Britain joins the Common Market, of course, her preference could be reduced still further.

Table 14. Britain's share in major export markets for cars outside North America

Percentage share of combined exports of seven main exporting countries[a]

	1954–1955	1959–1960	*1960 ('000 cars)*
Markets where Britain has a substantial preference[b]			
New Zealand	90.5	88.7	*24.4*
Federation of Rhodesia and Nyasaland[c]	98.4	71.3	*9.9*
British West Indies[d]	89.4	75.4	*15.6*
Malaya[e]	75.7	58.2	*10.0*
Australia	86.4	51.6	*51.0*
Irish Republic	81.5	78.2	*25.0*
Ceylon	68.9	64.7	*4.9*
Other markets			
Austria	5.1	6.2	*3.1*
Belgium/Luxemburg	14.9	9.8	*18.6*
British East Africa[f]	62.9	35.2	*4.7*
Denmark	28.7	15.4	*10.4*
Finland	20.6	14.5	*2.4*
France	25.1	17.3	*6.2*
Ghana[f]	58.0	27.6	*1.7*
India	32.8	30.7	*4.0*
Iran	12.1	15.6	*1.7*
Iraq	21.4	29.6	*1.0*
Italy	19.7	16.2	*4.8*
Japan	45.9	24.6	*1.0*
Mexico	1.8	14.3	*4.4*
Netherlands	26.7	20.6	*14.8*
Nigeria[f]	65.5	42.5	*5.4*
Norway	29.9	18.1	*6.9*
Pakistan	44.3	39.8	*1.6*
Portugal	18.0	14.0	*2.0*
South Africa	48.3	34.6	*40.0*
Sweden	30.3	14.9	*13.6*
Switzerland	7.4	6.5	*5.6*
Thailand	31.0	30.7	*1.2*
Venezuela	4.8	12.1	*1.8*
West Germany	22.7	4.2	*6.6*

Source : Society of Motor Manufacturers and Traders Yearbooks.

(a) Britain, France, Germany, Italy, Sweden, United States, Canada. Figures for the other six main exporting countries are given in Appendix III.
(b) Countries are arranged approximately in descending order of preference (including the effects of taxes and duties other than tariffs).
(c) Nyasaland is excluded in 1954.
(d) Includes Bahamas, Bermuda, British Guiana and British Honduras.
(e) Includes Singapore and British Borneo territories.
(f) Partly estimated.

Other major British markets

Britain's share has fallen in countries outside North America and Europe as well. Of the 31 main markets shown in table 14 there are only four—Iran, Iraq, Mexico and Venezuela—where Britain's share of total car imports has risen significantly since 1954-1955. In all of them the reason is that the United States share was initially large and has since fallen sharply, and it seems possible that at least in Mexico and Venezuela a change in American companies' market arrangements may have contributed. Both Ford and General Motors have subsidiaries in each country, and British exports to Mexico in 1959 consisted almost entirely of unassembled cars.

British cars still hold a very big share of exports to the seven major markets where they enjoy a substantial preference. The tariff margin ranges from 35 per cent in New Zealand (where its effect is reinforced by a sales tax of 33⅓ per cent) to 7½ per cent on the cheaper cars in Ceylon (where there is also a 5 per cent surcharge). In both these countries the British share has been well maintained (table 14); in New Zealand it has stayed close to 90 per cent, partly because both tariffs and the import quota system favour countries with local assembly plants. In the other five countries where Britain has preference her share has fallen sharply; this applies particularly to Australia, where the tariff preference is 10 per cent (or 2½ per cent against Canadian cars) and a 30 per cent sales tax increases its effect. There have also been heavy losses in those sterling area markets (East Africa, Ghana and Nigeria) where there is no preference and where falls in American exports have been less important than in India, Pakistan and South Africa.

Britain's share must be expected to go on falling in the markets outside North America and Europe. First, she is likely to lose preferences (page 30), and even if she did not she would be unlikely to maintain her very high share in some traditional sterling area markets.[1] Then there will be more forceful competition from American compact cars and also from the new small cars. Further, Japanese industry plans to export some 400 thousand cars by 1970; these cars are built for durability rather than speed, and are likely to sell well in underdeveloped countries. There may also be more competition from other new industries, such as those in Australia, Latin America,

[1] R. S. Gilbert and R. L. Major, 'Britain's Falling Share of Sterling Area Imports', *National Institute Economic Review*, no. 14, March 1961.

Table 15. The relative importance of four regions, as markets for British car exports

Percentage of number of cars

	1954–1955	1956–1957	1958–1959	1960	1961 1st half	*1965*	*1970*
United States & Canada	10.1	24.0	45.5	39.1	17.9	*24*	*17*
EEC & EFTA	22.2	20.1	13.9	16.3	27.4	*33*	*50*
Overseas sterling area	60.8	48.8	34.5	37.2	43.0	*36*	*29*
Other countries	6.8	7.1	6.1	7.4	11.7	*7*	*5*

Source : Table 10.

and possibly India before the end of the decade. Australian cars, for instance, are already being exported to New Zealand. But where the local industries are in fact subsidiaries of American or European companies, as is usually the case, they may be prevented by agreements with their parent companies from competing in a wide range of other markets.

Conclusion

A forecast, therefore, which assumes that Britain will still have her 1960 share in the world market for imports in 1965 does not seem a realistic one—particularly in the light of her experience in the last few years. The sum total of adverse factors is too great. In table 11, the consequence of the assumptions for the individual areas is that Britain's total share falls from 25 per cent in 1960 to 18 per cent in 1965 (in the first half of 1961 it was only about 16½ per cent). It implies exports in 1965 of around 675 thousand cars.

From 1965 onwards the important question for the British car industry—assuming that Britain does join the Common Market—will be the share that it obtains in imports of cars into Continental Western European countries. It has been assumed that Britain's share will rise a little (page 31) ; but since the effects of the Common Market on the pattern of trade are all very uncertain, the 1970 export figure of just over a million cars is a good deal more speculative than the 1965 figure. But in any case it is reasonably clear that Western Europe will become much more important as a market for British exports. Indeed, by 1970, it is quite possible—on fairly optimistic assumptions about the trends of European demand—that about half British car exports will be going to other European countries (table 15).

These figures of exports must be considered together with the share which foreign competitors may obtain in the British market. It has been assumed that the import percentage rises sharply in the main producing countries on the Continent ; the same assumption must be made for Britain. If negotiations for entering the Common Market are successful soon, perhaps something like 15 per cent of home demand in 1965 and 30 per cent in 1970 might be met from imports ; these are slightly higher figures than those taken for Germany, Italy and France together—some continuing competitive weakness is implied in the British industry.

By 1970, given that Britain joins the Common Market, it will presumably be normal commercial practice to think of Western Europe as one market. In 1960, the British industry supplied 23 per cent of the demand for new cars in Western Europe as a whole ; the figures for British and Western European demand in this article, together with the trade flows which are assumed, suggest that this figure of 23 may fall to about 19 in 1965 and 1970.

III. CAPACITY AND DEMAND

Introduction

The ' central assumptions ' of the previous discussion imply that the demand for the output of the British car industry will be around 1.6 million in 1965 and 2.4 million in 1970. These are, of course, the central assumptions of a wide range of possibilities.[1] In particular, the export and import figures assume the

[1] These ' central assumptions '—set down without ranges of possibility—are as follows :—

	1960 (actual)	1965	1970
		Thousands	
Home demand for cars	805	1,090	1,850
Less imports	55	165	550
	750	925	1,300
Plus exports	570	675	1,050
Output of British cars	*1,350	1,600	2,350

(**Including additions to stocks.*)

If, for instance, real disposable income in Britain rose only at 1½ per cent a year, instead of 2½ per cent as has been assumed, and if there were no rise in depreciation rates, demand for the British car industry's output in 1970 could be about 2 million. If, on the other hand, real incomes in Britain rose about as fast as they are expected to do in the rest of Europe, and if in addition the British industry held its 1960 share in world markets, this figure could be 2.9 million

rapid development of intra-trade in cars in a Common Market which includes Britain. If this does not happen, Britain's imports from the Continental countries and her exports to them will both be less, and consequently the net figure of demand for the output of British industry may not be substantially altered. How do these estimates of demand match with the industry's capacity?

Definition of capacity

Capacity is always a difficult concept to define. In this article (which is concerned with annual rather than weekly capacity) two concepts are used: 'standard volume' or 'straight time' capacity and 'maximum' capacity. Maximum capacity is taken as 100 per cent and is defined as the maximum annual output which a firm can produce; it involves systematic overtime working and normally a two-shift system;[1] it does not allow for any seasonal fall in output or for model changes; but it does take account of annual holidays and maintenance requirements. Standard volume differs from maximum capacity in that overtime is excluded and normal standard hours are worked. On average (with variations from firm to firm) standard volume is about 80 per cent of maximum capacity. Individual firms may exceed 100 per cent for short periods, but will seldom, if ever, do so for a period as long as a year, even when there is no seasonal fall in demand. For the industry as a whole, 90 per cent of maximum annual capacity is a fairly full rate of utilisation.

There is an additional difficulty about the concept of capacity in the car industry. Capacity for commercial vehicles is to some extent interchangeable with that for cars. This is particularly so for light commercial vehicles under 15 cwt., which in 1960 made up nearly half the output of the commercial vehicles industry. Consequently in the tables in this section figures are given for commercial vehicle capacity as well.

The industry's expansion plans

It was at the time of the high rate of capacity utilisation at the end of 1959 and the beginning of 1960, with long waiting lists for cars on the home market, that firms prepared plans for major extensions of their capacity. As these plans involved important changes in the regional pattern of employment, the Government insisted that part of the expansion should take place in Scotland and other regions where unemployment was above the national average. The Government did not however give any advice on the overall scale of the expansion or suggest any co-ordination of the investment plans to fit in with Government expectations about the growth of the economy. Broadly speaking, the plans (whose principal projects are set out in table 19 of Appendix I) provided for an expansion of car capacity from just over 1½ million a year in 1960 to just over 2¼ million in 1963.

But in the second half of 1960, home and export demand for cars fell away; by the end of the year the industry as a whole was working well below 70 per cent of maximum capacity. This low rate of output continued in the early months of 1961, and recovered a little in May and June; but (taking some account of changes in capacity since last year) the industry is still probably working at a capacity not much higher than about 70 per cent.

In these changed circumstances, some modification of the expansion plans was probably inevitable. The Leyland-Standard merger has resulted in a major reconsideration of the development plans for Standard; Vauxhall have announced a change of emphasis in their expansion from passenger cars to commercial vehicles. The other major schemes are reported to be going ahead as planned. It seems probable that in fact some rephasing is taking place, voluntarily or involuntarily, so that some schemes may take a year or two longer than originally envisaged;[2] But the main BMC schemes are approaching completion, and work on the others is now fairly well advanced. It still seems probable therefore that the industry will have maximum capacity in 1963 for 2 million cars and in 1965 for 2.3 million (table 16). These estimates assume that plants coming into operation in late 1962 or early 1963 will not reach full capacity until after 1963, but that by 1965 they will all be in full operation, and some further small additions to capacity will have resulted from reorganisation and technical advances.[3]

Capacity and demand in Britain

The estimates of capacity and demand in this article imply that the car industry will probably be working at between 60 and 80 per cent of maximum capacity (on an annual basis) between now and 1965.

[1] A three-shift system might increase capacity above this 100 per cent maximum, and has done so on a limited scale; but it is not likely to be a widespread practical proposition in the immediate future. It might become a more important factor in the long run, particularly if the standard week is reduced further.

[2] The recent Board of Trade inquiry into investment intentions (*Board of Trade Journal*, 22 September 1961, page 612) reports a significant downward revision by companies in the motor industry of their investment plans for 1961.

[3] Other recent estimates (*Economist*, 22 July 1961, *Financial Times*, 23 August 1961) put car capacity at 2½ million already in 1963.

Table 16. Estimated 1960 UK vehicle output, and maximum capacity in 1960, 1963 and 1965

Thousands

	Estimated output			Estimated maximum capacity								
	1960			1960			1963			1965		
	Cars	C.Vs.	Total	Cars	C.Vs.	Total	Cars	C.Vs.	Total	Cars	C.Vs.	Total
BMC	495	140	635	605	150	755	750	250	1,000	850	250	1,100
Ford	400	100	500	470	105	575	575	125	700	660	140	800
Vauxhall	146	106	252	200	100	300	200	150	350	250	150	400
Rootes	153	32	185	195	35	230	250	50	300	330	50	380
Standard[b]	108	14	122	160	15	175	175	35	210	175	50	225
Other	50	65	115	60	70	130	65	85	150	75	100	175
Total	**1,352**	**457**	**1,809**	**1,690**	**475**	**2,165**	**2,015**	**695**	**2,710**	**2,340**	**740**	**3,080**

Source : These figures are based on published information in Annual Reports of companies, *Motor Industry*, *American Automobile*, *Financial Times*, and the *Economist*. C.Vs. = commercial vehicles.

(a) All the figures are in unit terms. In terms of value of output, commercial vehicles are much more important. The output of ' others ' which comprises the manufacturers of heavy commercial vehicles and some of the specialist car manufacturers, would be a much higher proportion of total output in value terms.

(b) Before the merger with Leyland, which is included in ' other '.

If demand increases fairly steadily, it would probably be nearer to the lower end of this range in the middle of the period, since most of the new capacity will have come into operation by the middle of 1963. The central assumption about demand in 1965—a demand of 1.6 million cars compared with a maximum capacity for 2.3 million—implies a 70 per cent capacity utilisation in that year. This makes no allowance for any possible switch of capacity to light commercial vehicles, and it is a figure for the industry as a whole ; for individual firms the position may be much better or much worse than this.

The car assembly industry is one in which the ratio of fixed to total costs is relatively low, compared, for example, with the steel industry ; consequently the direct effect on the unit cost of a car of working below capacity does not appear to be very great. The way in which unit costs varied with capacity utilisation in a large car firm in 1954 is shown in table 17. The figures suggest that at 60 per cent of maximum capacity unit costs were only about 3½ per cent higher than at 95 per cent and the difference between 75 and 85 per cent of maximum capacity working is only 1 per cent of unit costs. However, this calculation does not include special tools and development costs in fixed costs ; if they are included, the difference in unit costs might be twice as big as this. Further, it makes no allowance for any long-run effect on the unit costs or prices of component suppliers.

Although the demand forecasts suggest a wide margin of spare capacity in 1965, the 1970 estimates suggest that between 1965 and 1970 the slack would be taken up, and that by that year the industry, with its present planned expansion, would be working to the practical limit of capacity again.[1]

Table 17. Variation in unit costs at differing rates of capacity utilisation, 1954.

Output as per cent of standard capacity	Output as per cent of maximum capacity	Per cent increase or decrease in actual unit cost from cost at standard volume
117.7	94.2	− 1.4
106.0	84.8	− 0.3
102.9	82.1	− 0.05
100	*80*	*0*
95.8	76.6	+ 0.4
91.5	73.2	+ 0.7
84.3	67.4	+ 1.3
77.8	62.2	+ 2.1

Source : Adapted from Maxcy and Silberston, *The Motor Industry*, Allen & Unwin, 1959, p. 65.

Capacity and demand in Western Europe

The Continental Western European industry, taken as a whole, appears to be planning to expand capacity about as fast as the industry in Britain ; the rate is rather slower in France, and very much faster in Italy, where the figures imply a doubling of capacity between 1960 and 1965. The information for Continental manufacturers' plans is a good deal scantier than that

[1] This allows for some increase in capacity between 1965 and 1970, not from plant expansion, but from reorganisation and technical advance.

Table 18. Estimates of Western European vehicle capacity[a]

Thousands

	NIESR estimates			ECE estimates		French estimates
	1960	1963	1965	1962/3	1965/70	1965
United Kingdom	2,165	2,700	3,075	2,200	3,000	3,000
of which, **cars**	**1,690**	**2,025**	**2,350**	..	..	..
West Germany	2,210	2,825	3,225	2,000	3,500	3,000
France	1,580	1,800	2,100	1,800	2,000	1,800
Italy	725	1,200	1,500	1,200	1,500	1,500
Total EEC[b]	4,515	5,825	6,825	5,000	7,000	6,300
of which, **cars**	**4,010**	**5,175**	**6,075**	..	..	..
Total, four main Western European producers	6,680	8,525	9,900	7,200	10,000	9,300
of which, **cars**	**5,700**	**7,200**	**8,425**	..	..	..

Source : Tables 16 and 20 ; ECE ' Survey of Europe, 1960 '; *Financial Times*, 4 May 1961.

(a) Excludes tractors, and also Swedish, Spanish and Dutch production.
(b) For details by manufacturers, see Appendix I, table 20.

for the British industry ; estimates made by the Economic Commission for Europe and by the French Ministry for Industry are compared with NIESR estimates in table 18. These estimates are for cars and commercial vehicles together : commercial vehicles are a comparatively small part of Continental manufacturers' output, and in table 18 figures have been put in for car capacity in 1963 and 1965, assuming that the ratios between cars and commercial vehicles are about the same as they were in 1960. This puts the car capacity of the three main Continental European producers at just over 6 million cars in 1965.

The tentative—and rather optimistic—figures of world demand and the illustrative percentages of shares set out in part II (pages 26-34) probably imply a total home and export demand for cars for these three producing countries of 5½ million in 1965. This would represent about 90 per cent of their maximum capacity—which would be a very satisfactory rate of utilisation. For Western Europe including Britain the implied capacity utilisation figure is around 85 per cent. The Economic Commission for Europe also came to the conclusion that there would be no general surplus of capacity in Europe, although there might temporarily be problems for individual firms and countries. The French Ministry of Industry, on the other hand, even on a more conservative estimate of capacity (particularly for France itself) suggested that there would be a surplus capacity problem, and called for coordination of investment plans in Europe in order to avert this danger.

The capacity utilisation figures suggested for 1965 are very different for the Continental producers (about 90 per cent) and for Britain (about 70 per cent). There is nothing impossible about differences of this kind—they are no greater than those already existing in the first half of 1961. The differences are still there in 1965 because the previous analysis assumes that the 1954-1960 trends continue—that real income will rise more slowly in Britain than it does on the Continent and that the British industry's share in world car markets continues to fall—although more slowly than in the past. If in fact the British economy grows faster and if the British car industry becomes appreciably more competitive, then these projected differences in capacity utilisation in 1965 would probably not appear.

APPENDIX I. CAPACITY AND DEMAND

Table 19. U K motor industry : the 1960 expansion plans (excluding tractors)—principal schemes

Firm	Location	Addition to factory area, '000 sq. ft.	Products or process	Planned investment, £mn.		Estimated additional number of employees	Comments
BMC	Scotland, Bathgate	1,200, new plant	Heavy C.Vs., tractors, heavy engines, gear-boxes	11.2	46[a]	6,000-10,000	Production commencing autumn 1961
	Midlands, Birmingham, etc.	Extensions to present factories at Longbridge, Washwood Heath, etc.	Cars, light C.Vs.	23		..	Main developments will be completed 1961-62 as truck and tractor production is moved to Bathgate
	S. Wales, Llanelly	530, extensions	Radiators and pressings	7.5		4,200	Production commencing 1962
	Potteries, Swynnerton	250	Packing CKD[b]	..		1,000	
Ford	Merseyside, Halewood	1st stage : 2,605 2nd stage : 2,312 new plant	Cars	28	140	8,000 (1962) 16,000 (1965)	Production commencing autumn 1962
	South-East, Langley	Extension up to 733	Heavy C.Vs.	3.5		..	Work proceeding as planned
	South-East, Dagenham	Reorganisation	Cars, engines, parts	..		..	Expansion of C.V. production at Langley and Southampton ; transfer of tractors to Basildon, and new car facilities at Halewood will permit reorganisation and expansion of engine and parts capacity at Dagenham
Vauxhall	Merseyside, Ellesmere Port	2,500, new factory	Parts for C.Vs.	..	60	3,500-7,000	Emphasis in expansion plan changed in 1961 from cars to C.Vs., and some rephasing of Merseyside expansion
	Midlands, Luton & Dunstable	500, extension	Cars and C.Vs.	..			
Rootes	Scotland, Linwood	800, excluding Pressed Steel extension at adjoining works	Small cars	15	30	3,500	Work proceeding but production may not commence before 1963
	Midlands, Coventry, etc.	Extensions to existing works	Cars and C.Vs.	15		..	
Standard	Merseyside, Speke	550, including extension at Hall Engineering	Bodies, spare parts	11	18	4,000	No definitive announcement made since take-over by Leyland but major revision of original expansion plan seems probable
	Midlands, Coventry	Improvements at existing works	Cars, light C.Vs.	7		..	
Pressed Steel	Scotland, Linwood	500, extension	Bodies for Rootes cars	7	17[a]	2,000	Probably completed in 1962
	Midlands, Swindon	750, extension	Bodies	10		..	Probably completed in 1962

Sources : *Financial Times*, *Economist*.

(a) Excluding investment in domestic appliance factories, etc.
(b) CKD : ' Complete knock down ', for overseas assembly.

Note : The figures for planned investment, factory floor space, and employment are based on the original 1960 announcements and do not take account of possible revisions and re-phasing of the plans since then. It should also be noted that the basis for the investment estimates varies somewhat from firm to firm, depending upon whether special tools are included and similar factors. C.Vs. : commercial vehicles.

Table 20. Estimated maximum vehicle[a] capacity by manufacturers : EEC

Thousands

Country	Firm	1960	1963	1965
W. Germany	Volkswagen	930	1,250	1,350
	Daimler-Benz[b]	330	450	500
	Opel	400	550	700
	Ford	230	300	350
	Borgward	120	20[c]	25[c]
	Others	200	250	300
	Total, Germany	**2,210**	**2,820**	**3,225**
France	Renault	675	750	800
	Citroen	380	450	650
	Simca	260	300	330
	Peugeot	250	280	300
	Others	15	20	25
	Total, France	**1,580**	**1,800**	**2,105**
Italy	Fiat	600	950	1,200
	Others	125	250	300
	Total, Italy	**725**	**1,200**	**1,500**
EEC	**Total, EEC[d]**	**4,515**	**5,820**	**6,830**

Sources : Motor Industry, American Automobile, Financial Times, Handelsblatt (Düsseldorf), Company reports, and NIESR estimates.
(a) All vehicles, including commercial vehicles, but excluding tractors.
(b) Including Auto-Union.
(c) For commercial vehicles only.
(d) Excluding small production in Netherlands and Belgium.

APPENDIX II. FORECAST OF HOME DEMAND

Basic data

(a) *The age and size distribution of cars in use*

Table 21 gives estimates of the age distribution, for three size categories, of cars in use for selected years 1946 to 1960.

There are no direct estimates of the age distribution of cars in use in post-war years. The estimates used in the first part of this article were derived from cumulated registrations over several previous years, adjusted for scrapping. The yearly censuses of cars in use (carried out by the Ministry of Transport) and the statistics of new registrations make it possible to distinguish between cars registered in, or before, 1946 and cars registered after 1946 when the tax basis was changed. From these figures scrapping of post-1946 registered cars appears to have been negligible (if it is assumed that cars purchased through the personal export scheme are exported within twelve months).

The adjustments for scrapping in each age group of cars registered before 1946 were derived from pre-war survival rates of private cars (*The Motor Industry of Great Britain 1939*, SMMT Ltd., pages 99-104). These survival rates had been calculated from data for three counties (Middlesex, Lancashire and Norfolk) covering the period 1937-38, and did not distinguish between cars of different sizes. Estimates of the rate of survival in each of the three size categories were obtained by modifying the overall rates so that for each size category cumulated annual new registrations up to 1938, after adjustments for scrapping, gave on summation, approximately the same figures as the 1938 census of cars in use. The survival rates used for each size category are shown for different ages of car in table 22.

To estimate the age distribution of cars in 1946, it was found that these survival rates could be used satisfactorily if cars registered between 1940 and 1945 were counted as two years old in 1946, cars registered in 1939 as three years old, and so on. With this modification, the 1938 survival rates were applied to new registrations in 1946 and in previous years. The summation of the estimated number of cars surviving in each age group in 1946 coincided fairly closely with the results of the Ministry of Transport's census of cars in use, for each size category. Next the age distribution of the car park in 1959 was estimated, bearing in mind that scrapping of post-1946 registered cars had been negligible. Since it was also evident that relatively few pre-1947 cars had been scrapped between 1946 and 1959, much higher survival rates than table 22 would suggest had to be used. It was found that the part of the 1938 survival curves relating to cars four or more years old provided, after some modification, reasonable results. The survival rates, shown in table 23, were applied to new registrations in 1946 and in previous years to give the age distribution of surviving pre-1947 cars in use in 1959. The resulting totals were very close to the census results for pre-1947 registered cars in use in 1959.

From these two estimated age distributions for 1946 and 1959 it was possible to determine the number of cars registered in a given year before 1947 which had been scrapped between 1946 and 1959. For all cars registered before 1947 the number of cars scrapped in each year from 1946 to 1959 was obtained from the annual censuses of car park and new registrations in each year. Thus to obtain scrapping by age group in a given year, the proportion of all pre-1947 cars scrapped in that year, compared to total scrapping between 1946 and 1959, was applied to the numbers of cars registered in a particular year which had been scrapped in the same period.

Finally the estimated age distribution for 1960 was

Table 21. Estimated age distribution of the car park in Great Britain, 1946-1960

Thousand cars at end of year

A. Small cars (engine capacity less than 1,200 c.c.)

Age of car	1946	1947	1948	1950	1952	1954	1956	1958	1959	1960
New	84.2	92	49	40	69	196	204	249	295	429
One	35.2[a]	84	88	67	42	120	247	194	240	285
Two		35	84	47	39	66	188	194	194	240
Three	207.4		35	88	67	42	120	247	194	194
Four	166.0	207		84	47	39	66	188	247	194
Five	178.7	166	207	35	88	67	42	120	188	247
Six	161.7	178	166		84	47	39	66	120	188
Seven	139.2	162	178	207	35	88	67	42	66	120
Eight	92.9	139	162	166		84	47	39	42	66
Nine	66.7	93	139	178	207	35	88	67	39	42
Ten	31.8	67	93	162	166		84	47	67	39
Eleven	20.7	32	67	139	178	207	35	88	47	67
Twelve	13.4	21	32	93	162	166		83	88	47
Thirteen	9.4	13	21	67	139	178	204	34	81	88
Fourteen	3.7	9	13	32	93	162	162		33	79
Fifteen	1.9	4	9	21	67	139	172	195		32
Sixteen	2.6	2	4	13	32	93	153	150	188	
Seventeen		3	2	9	20	67	127	154	142	172
Eighteen			3	4	11	30	83	126	138	121
Nineteen				2	5	18	54	97	107	108
Twenty				1	1	8	24	58	73	74
Twenty-one						2	13	36	40	49
Twenty-two							4	17	23	24
Twenty-three							1	8	10	13
Twenty-four								3	4	4
Twenty-five								1	1	2
Total	**1,215.5**	**1,307**	**1,352**	**1,455**	**1,552**	**1,854**	**2,224**	**2,503**	**2,667**	**2,924**
Depreciated stock	*789.9*	*818*	*800*	*781*	*767*	*948*	*1,202*	*1,398*	*1,543*	*1,797*
Of the new registrations :										
Used cars	..	*4.3*	*1.3*	*2.0*	*3.9*	*4.1*	*4.7*	*5.6*	*4.2*	*5.1*
Personal export purchases[b]	..	*3.8*	*1.8*	*1.5*	*2.6*	*8.5*	*9.4*	*9.2*	*9.6*	*13.3*

B. Medium-sized cars (engine capacity 1,200-1,800 c.c.)

Age of car	1946	1947	1948	1950	1952	1954	1956	1958	1959	1960
New	21.7	31	25	33	53	103	111	219	250	268
One	6.9[a]	22	30	28	33	84	136	147	211	242
Two		7	22	24	32	51	98	106	147	211
Three	63.1		7	30	28	33	84	136	106	147
Four	64.4	63		22	24	32	51	98	136	106
Five	77.8	64	62	7	30	28	33	84	98	136
Six	62.2	78	62		22	24	32	51	84	98
Seven	43.7	62	76	62	7	30	28	33	51	84
Eight	33.6	44	60	62		22	24	32	33	51
Nine	18.4	34	42	76	62	7	30	28	32	33
Ten	14.0	18	32	60	62		22	24	28	32
Eleven	6.1	14	16	42	75	61	7	30	24	28
Twelve	4.2	6	13	32	59	60		21	30	24
Thirteen	3.0	4	5	16	41	73	59	6	20	30
Fourteen	1.8	3	3	13	31	56	57		6	19
Fifteen	0.7	2	2	5	16	39	67	56		6
Sixteen		1	1	3	13	29	50	52	54	
Seventeen				2	5	15	33	57	49	48
Eighteen				1	3	12	24	39	50	41
Nineteen					1	5	12	23	30	34
Twenty						2	9	15	16	20
Twenty-one							3	7	9	9
Twenty-two							1	4	3	5
Twenty-three								1	1	1
Total	**421.6**	**453**	**458**	**518**	**597**	**766**	**971**	**1,269**	**1,468**	**1,673**
Depreciated stock	*233.5*	*240*	*233*	*244*	*273*	*387*	*526*	*746*	*897*	*1,048*
Of the new registrations :										
Used cars	..	*1.5*	*0.7*	*1.7*	*1.4*	*2.5*	*3.0*	*4.7*	*4.3*	*5.2*
Personal export purchases[b]	..	*1.3*	*0.9*	*1.3*	*2.0*	*4.5*	*5.2*	*8.1*	*8.2*	*8.3*

Table 21 (*Continued*)

C. Large cars (engine capacity greater than 1,800 c.c.)

Age of car	1946	1947	1948	1950	1952	1954	1956	1958	1959	1960
New	13.5	22	36	59	67	87	85	88	100	109
One	(a)	14	21	50	56	78	99	67	84	97
Two	3.6	4	14	35	57	64	83	81	67	84
Three	24.0		4	21	50	56	78	99	81	67
Four	29.4	24		14	35	57	64	83	99	81
Five	36.3	29	23	4	21	50	56	78	83	99
Six	30.4	36	27		14	35	57	64	78	83
Seven	23.8	30	33	23	4	21	50	56	64	78
Eight	14.8	24	27	27		14	35	57	56	64
Nine	6.4	15	21	33	23	4	21	50	57	56
Ten	3.7	6	13	27	27		14	35	50	57
Eleven	3.1	4	5	21	32	23	4	21	35	50
Twelve	1.2	3	2	13	26	26		13	21	35
Thirteen	2.0	1	1	5	20	31	23	3	12	21
Fourteen		2		2	13	25	24		3	11
Fifteen			1	1	5	19	27	19		3
Sixteen					2	12	20	20	17	
Seventeen				1		3	15	22	17	14
Eighteen						1	8	14	18	14
Nineteen							2	10	10	11
Twenty								4	6	6
Twenty-one								1	2	4
Twenty-two									1	1
Total	**192.2**	**214**	**228**	**336**	**452**	**606**	**765**	**885**	**961**	**1,045**
Depreciated stock	*82.1*	*91*	*105*	*169*	*226*	*303*	*371*	*397*	*427*	*460*
Of the new registrations :										
Used cars	..	*1.1*	*1.0*	*2.9*	*3.7*	*3.4*	*5.1*	*4.8*	*4.7*	*4.8*
Personal export purchases(b)	..	*0.9*	*1.3*	*2.2*	*2.5*	*3.8*	*3.9*	*3.2*	*3.3*	*3.4*

Note : (i) For cars registered before 1947, the size of car has been defined as :
'small' : less than 10 h.p.
'medium' : 10 h.p. to 14 h.p.
'large' : greater than 14 h.p.

(ii) The heavy line separates cars registered in or before 1946, and after 1946. Scrapping of cars registered after 1946 has been assumed negligible.

(a) All cars registered between 1940-45 have been taken as two years old in 1946.
(b) The total of such purchases is known, their breakdown by size has been estimated.

Table 22. Estimated survival rates of cars in different size categories, 1938

Year of registration	Age of car (years)	Percentage of cars surviving :		
		Small(a)	Medium(b)	Large(c)
1938	0	100.0	100.0	100
1937	1	99.8	99.8	99
1936	2	99.4	98.5	96
1935	3	99.0	96.8	92
1934	4	98.0	94.5	85
1933	5	96.0	91.5	74
1932	6	92.0	85.5	64
1931	7	86.0	76.3	50
1930	8	76.0	62.8	37
1929	9	63.0	45.0	20
1928	10	47.0	31.5	12
1927	11(d)	35.0	19.7	6

Source : Derived from *The Motor Industry of Great Britain* 1939, SMMT Ltd., pages 99-104.

(a) 'Small' : cars of less than 10 h.p., assumed equivalent to less than 1,200 c.c. for cars registered after 1946.
(b) 'Medium' : cars between 10 h.p. and 14 h.p., assumed equivalent to between 1,200 c.c. and 1,800 c.c.
(c) 'Large' : cars greater than 14 h.p., assumed equivalent to greater than 1,800 c.c.
(d) Since new registrations are not readily available for years before 1927, the following average survival rates were applied to cars in use in 1927 : 'small' : 10 ; 'medium' : 5 ; and 'large' : 2.

obtained by using the survival rates given in table 23 (but using the 1940/45 rate for 1946 registrations, the 1939 rate for 1940/45 registrations, and so on), and adjusting the final results to approximate to the census figures of car park in 1960.

In the calculation of car stock from these estimates of car park by age group, the older cars will be considerably depreciated and so small errors in the estimates will not affect greatly the figures for stock.

(b) *Depreciation rates and the calculation of car stock*

To convert the car park figures into car stock, depreciation rates, based upon relative secondhand prices of representative models, were used. Several models, pre- and post-war, were chosen as representative of small, medium-sized and large cars. The quoted prices of a given model new, at the end of six months, eighteen months and so on, were traced for as long as possible in the period 1947-1960. The secondhand prices referred to September in each year and were taken from issues of *Glass's Guide to Used Car Values* which were kindly made available by William Glass Ltd. The relationship between the new and secondhand series of prices of a given model was, of course, not perfect, but over the period as a whole and over a fairly wide range of models the following rates of depreciation seemed acceptable : small cars 7½ per cent, medium-sized cars 10 per cent and large cars 15 per cent.

Table 23. Estimated survival rates of pre-1947 cars in different size categories, 1959

Year of registration	Percentage of cars of different ages surviving in 1959 :		
	Small	Medium	Large
1946	96	91	85
1940/1945	94	88	74
1939	90	82	64
1938	84	72	50
1937	74	59	37
1936	61	41	20
1935	45	28	12
1934	33	16	6
1933	22	8	2
1932	14	2	1
1931	7		
1930	3		
1929	1		

Note : These rates were applied to the new registrations in 1946 and in previous years.

With these rates the car park in each year was converted into car stock. Thus for medium cars in a given year the numbers of cars in use were weighted as follows : new cars by 0.95 (assuming 6 months' depreciation on average), one-year old cars by 0.855, two-year-old cars by 0.770 and so on. In this way three car stocks were obtained for each year. They may be considered as the park of small cars expressed in new small car equivalent units, the park of medium-sized cars in new medium-sized car equivalent units and the park of large cars in new large car equivalent units (see table 22). Finally these three stock figures in each year were combined using the relative new prices of representative models in 1959. A new medium-sized car and a new large car were assumed equivalent to $1\frac{1}{3}$ and 2 new small cars respectively ; the result is to give a single car stock figure for each year which expresses the car park in new small car equivalent units (see table 24).

(c) *Determinant variables of car stock*

Disposable personal income was taken from *National Income and Expenditure 1960* (Blue Book) and earlier issues.[1] The current values were deflated by the average value (1954=100) of all consumers' expenditure and the final figures expressed per head of the population.

Prices of new cars were obtained for several models over several years. These were combined to give a price index of new cars which agreed fairly well with the average value of consumers' expenditure on vehicles, new and secondhand (representing mainly new car prices) (*Blue Book 1960*).

The secondhand prices that had been used to establish depreciation rates were also used to obtain an index of used car prices. These related to two models in each size category. Annual changes in the price of a model of given age were calculated to form a series of chain indexes

[1]The 1961 *Blue Book* arrived too late for the slight official revisions to be incorporated in the analysis.

Table 24. Estimates of car stock, 1947-1960

Thousands of units

End-year	Small cars new small car units	Medium cars new medium car units	Large cars new large car units	All cars new small car units	*Car park thousand cars*
Relative weights :	1	$1\frac{1}{3}$	2	..	..
1947	818	240	91	1,319	*1,974*
1948	800	233	105	1,320	*2,038*
1949	806	236	137	1,394	*2,185*
1950	781	244	169	1,442	*2,309*
1951	762	251	195	1,487	*2,434*
1952	767	273	226	1,582	*2,601*
1953	827	326	265	1,791	*2,872*
1954	948	387	303	2,068	*3,226*
1955	1,109	476	349	2,439	*3,659*
1956	1,202	526	371	2,643	*3,960*
1957	1,285	610	375	2,847	*4,270*
1958	1,398	746	397	3,185	*4,657*
1959	1,543	897	427	3,590	*5,096*
1960	1,797	1,048	460	4,114	*5,642*

in each age group. These indexes were then combined to provide a single index using as weights the age and size distribution of the car park in 1959.

Changes in *hire purchase* controls were taken from *National Institute Economic Review*, no. 10, July 1960, table 3, page 41. Two variables were used. The first was the proportion of credit extended which had to be repaid in twelve months. It therefore reflected only the length of the repayment period. The second took account also of the initial deposit by including it with the amount of credit to be repaid within twelve months. Before 1952 there were no controls on hire purchase but since credit facilities were not easily extended it was assumed that the average length of contract was one year. For 1952 and subsequent years the official regulations concerning the maximum repayment period and minimum deposit were adopted. From July 1954 to February 1955 and from October 1958 to April 1960 when no maximum repayment period was stipulated the average length of contract was taken as $2\frac{1}{2}$ and 3 years respectively.

The main data for the analysis of car stock changes are shown in table 25. The population figures implicit in some of the series were taken from the *Annual Abstract of Statistics* and are mid-year *de facto* estimates.

The model

(a) *Car stock*

Two assumptions are basic to the model accounting for changes in car stock. The first expresses the desired level of stock in terms of its determinants, such as real disposable income, and may be considered as the long-term relationship. The second relates the desired stock to the actual

stock level and so provides a short-term relationship. The two assumptions may be stated formally as :

$$S_t^* = A\, Y_t^{\alpha}\, P_t^{\beta}\, H_t^{\gamma}\, 10^{gt} \quad .. \quad .. \quad .. \quad (1)$$

$$\text{and} \quad \frac{S_t}{S_{t-1}} = \left(\frac{S_t^*}{S_{t-1}}\right)^r \quad .. \quad .. \quad .. \quad .. \quad .. \quad (2)$$

Where the following notation holds :

- S^* = desired stock level per head
- S = actual stock level per head
- Y = real personal disposable income per head
- P = index of car prices (secondhand) divided by the overall consumer price index
- H = hire purchase variable
- A = some constant
- r = rate of adjustment of consumers' spending on car stock to a given change in real income, etc.
- t = time subscript, measured in yearly intervals.

Equations (1) and (2) expressed in logarithms become :

$$\log S_t^* = \log A + \alpha \log Y_t + \beta \log P_t + \gamma \log H_t + gt \quad .. \quad .. \quad .. \quad .. \quad (3)$$

$$\text{and} \quad \log S_t = r \log S_t^* + (1\text{-}r) \log S_{t-1} \quad .. \quad .. \quad (4)$$

Combining (3) and (4) gives

$$\log S_t = r \log A + r\alpha \log Y_t + r\beta \log P_t + r\gamma \log H_t + rgt + (1-r) \log S_{t-1} \quad .. \quad (5)$$

This form of the equation which relates the actual stock level to income, and the previous stock level may be used to obtain estimates of the composite parameters αr, βr, γr, rg and of the coefficient (1–r). From these estimated coefficients further estimates of the long-term parameters α, β, γ and g can be derived.

Table 25. Car stock per head and real disposable income per head, 1947-1960

	Car stock per 100 persons (end-year)	Real disposable income per head
	New small car units	*£ at 1954 prices*
1947	2.675	222.9
1948	2.661	218.5
1949	2.791	224.7
1950	2.873	229.2
1951	2.956	226.3
1952	3.137	231.6
1953	3.540	241.5
1954	4.071	248.7
1955	4.786	261.3
1956	5.161	268.1
1957	5.532	271.5
1958	6.163	275.0
1959	6.906	286.2
1960	7.854	300.1

In fact the equation (5) was first cast into first differences in order to avoid the danger of serial correlation. Thus :

$$\Delta \log S_t = r\alpha \Delta \log Y_t + r\beta \Delta \log P_t + r\gamma \Delta \log H_t + rg + (1-r) \Delta \log S_{t-1} \quad .. \quad .. \quad (6)$$

Where $\Delta \log S_t = \log S_t - \log S_{t-1}$, etc.

Using the method of least squares with annual observations for the period 1948 to 1960, the following estimates of the coefficients were obtained :

Estimated coefficients in equation (6), (1948–60).

$R^2 = 0.768$	Short-term coefficients			Long-term coefficients		
	Coefficient	Estimate	*Standard error*	Coefficient	Estimate	*Standard error*
1 Income elasticity	$r\alpha$	1.503	*0.478*	α	2.362	*1.303*
2. Price elasticity	$r\beta$	−0.0012	*0.0468*	β	−0.0019	*0.0736*
3. Hire purchase effect	$r\gamma$	−0.0238	*0.0481*	γ	−0.0374	*0.0754*
4. Time trend	rg	0.0085	*0.0070*	g	0.0133	*0.0090*
5. Delayed reaction factor	(1−r)	0.3638	*0.2015*	r	0.6362	*0.2015*

Note : The Durbin-Watson statistic suggested no significant serial correlation in the residuals, at the 5 per cent probability level.

As shown by the multiple correlation coefficient (R^2) some 77 per cent of the variation in annual changes in car stock was accounted for by this combination of explanatory variables. But the coefficients of price change and hire purchase regulations are so low, with high associated standard errors, that neither of these factors contributed significantly to this explanation. In the forecasts only the relationship between stock and income, and the time trend (which corresponds to 3.1 per cent a year) were retained.

Equation (6) was also estimated using pre-war annual data from 1926 to 1938. Car stock was calculated in this period using an overall depreciation rate of 25 per cent (which reflected more nearly pre-war conditions), with no account taken of the size composition of the car park. The following estimated coefficients were obtained :

Estimated coefficients in equation (6), (1926–38).

$R^2 = 0.743$	Short-term coefficients			Long-term coefficients		
	Coefficient	Estimate	*Standard error*	Coefficient	Estimate	*Standard error*
1. Income elasticity	$r\alpha$	1.698	*0.619*	α	3.275	*1.442*
2. Price elasticity	$r\beta$	0.1577	*0.2061*	β	0.3042	*0.4007*
3. Time trend	rg	0.0067	*0.0082*	g	0.0128	*0.0144*
4. Delayed reaction factor	(1−r)	0.4817	0.1191	r	0.5183	*0.1191*

The income elasticity (α) is somewhat higher than the post-war one partly because no adjustments for size were made. On the other hand, the sign of the estimated price elasticity (β) is not what would be expected. The time trend (g : which corresponds to 3 per cent a year) is about the same as the post-war estimate.

(b) *New registrations or purchases*

From the estimated equation for car stock it is possible to deduce an ' explanation ' of new registrations between 1948 and 1960. New purchases may be divided into two parts : investment demand, that is additions to stock, and replacement demand, that is the part of opening car stock used up in a year (plus the depreciation of current new registrations).

Thus new registrations (q_t) in a given year may be written as :[1]

$$q_t = (S_t - S_{t-1}) + (kS_{t-1} + \tfrac{1}{2}dq_t) \quad \ldots \quad \ldots \quad (8)$$

where k = the replacement rate (at which opening stock is used up), and will be related to the rate of depreciation (d).

It is therefore possible, from the ' explanation ' of car stock (S) to derive a numerical expression accounting for new registrations (q) once an estimate of the replacement rate (k) has been made.

The *replacement rates* (table 26), have been calculated by comparing the opening stock (or the stock at the end of one year) with its level after one year, omitting new purchases during that year. The ratios thus obtained will reflect both depreciation and scrapping. If there were no scrapping, that is if cars became infinitely old, then these replacement rates would be the same as the depreciation rates originally used to calculate stock. But the actual replacement rates used are higher because scrapping in fact takes place. The advantage of this method of calculating replacement demand is that it will be affected by the shape of the age distribution of cars only to the extent that scrapping is not systematic in the way described by the survival rates. Thus the major part of replacement demand represents the depreciation of stock and scrapping is a relatively small part. The rates shown in table 26 vary slightly but in more recent post-war years the degree of variation has not been great.

For the purpose of forecasting, an overall replacement rate of 12 per cent was adopted, on the assumption that depreciation rates did not change (text table 8). If, however, depreciation rates (as reflected in relative secondhand car prices) are assumed to rise (forecast B in table 8) this in turn implies an increase in scrapping and hence a rise in the rate of replacement. This effect is, perhaps, best seen if a car is considered to be scrapped after 90 per cent depreciation. For an overall depreciation rate of 10 per cent this will occur when a car is nearly 22 years old, but for a depreciation rate of 30 per cent, a car will have depreciated 90 per cent by the time it is $6\frac{1}{2}$ years old. The forecast B (table 8) was made assuming a replacement rate of 15 per cent, and this replacement rate would, as the pre-war calculations suggested, be associated with a depreciation rate of about 25 per cent.

[1]Using a slightly different notation, the full development of this theory is given in : R. Stone and D. A. Rowe, ' The Market Demand for Durable Goods ', *Econometrica*, vol. 25, no. 3, July 1957.

Table 26. Replacement rates of car stock, 1948-1960

Percentages of previous end-year stock level

	Small cars	Medium cars	Large cars	All cars
Depreciation Rate	*7.5*	*10*	*15*	..
1948	7.9	13.0	20.6	11.0
1950	7.9	10.2	16.6	10.1
1952	8.0	11.1	16.2	10.8
1954	8.3	11.4	16.2	11.4
1956	9.1	11.7	16.3	11.9
1958	9.9	11.8	15.8	12.0
1960	10.3	11.6	16.0	12.0

Note : The difference between the original depreciation rates and the replacement rates shown reflects the incidence of scrapping. Thus depreciation plays the major part and scrapping in a given year a relatively small part in the determination of replacement demand in that year.

Once the car stock model is estimated, using a given depreciation rate, it will be affected by changes in depreciation rates only insofar as these higher rates mean a higher rate of scrapping.

(c) *Cross-section estimates* (Great Britain : 1953)

The two estimated relationships between car stock and gross income, and car ownership and gross income, shown in chart 3, were:

$$\log X_i = -4.55 + 2.48 \log Y_i$$
$$(0.51) \quad (0.19)$$
$$R^2 = 0.98$$

and

$$\log X^1_i = -3.31 + 1.58 \log Y_i$$
$$(0.33) \quad (0.12)$$
$$R^2 = 0.98$$

where: X = current market value of cars owned per hundred ' income units '

X^1 = percentage of car-owning ' income units ' per hundred income units

Y = mean gross income (before taxation) per income unit

i = subscript describing different income levels.

Standard errors of the estimates are shown in brackets beneath the estimate concerned.

The first relationship provides an estimated income-stock elasticity of 2.48. The income-ownership elasticity, estimated in the second relationship is 1.58; it is lower than the first elasticity because here cars of all ages and sizes are counted as equivalent.

The Savings Survey from which these data are taken was carried out by the Institute of Statistics (Oxford University) in cooperation with the Government Social Survey. The survey was taken in April and May 1953 and achieved 2,104 successful interviews in a sample covering Great Britain (this was a response rate of 66 per cent).

The forecasts, 1965 and 1970

The forecasts of car stock and home demand for cars made use only of the estimated income elasticity and time trend (with modifications). This means that any other factors which affected the trend of car stock in 1948-60 are implicitly assumed to continue through to 1965 and 1970 (unless a specific adjustment is made, as is done for the effect of the time trend).

The main problem in projecting the estimated relationship was the starting point to adopt. There is no reason why the observed level of stock in any single recent year should be typical of the relationship between desired and actual stock posited by the theory, since it may contain some 'accidental' element. Consequently two methods of forecasting were adopted.

(a) *Car stock*

First an estimate of the desired *level* of stock (S*) was obtained from the relationship set out in equation (3). This estimate embodied, therefore, information from the whole period 1948-60. Since actual and desired stock levels are related:

$$\log S_t = r \log S_t^* + (1-r) \log S_{t-1}$$

it was possible to forecast S_t, for it can be shown that:

$$\log S_{t+n} = (\alpha \log \lambda + g)\left\{(n+1) - \frac{1-(1-r)^{n+1}}{r}\right\} + \left\{1-(1-r)^{n+1}\right\} \log S_t^* + (1-r)^{n+1} \log S_{t-1}$$

Where n is counted in years from 1960, and $(\lambda-1)100$ is the assumed annual percentage increase in income. (For example, $2\frac{1}{2}$ per cent a year is equivalent to $\lambda=1.025$).

The second method made use of the relationship:

$$\triangle \log S_t^* = \alpha \triangle \log Y_t + g$$

where α and g are the income elasticity and time trend estimated from the period 1948-60, except where specified in the text. The projected increase in desired stock was then applied to the observed level of stock in 1960, thereby assuming that the relationship between desired and actual stock in 1960 was maintained in 1965 and 1970.

In fact both methods gave remarkably similar results and the latter method was finally adopted. Thus levels of car stock per head were forecast for 1964, 1965 and 1969, 1970. Using the population forecasts for these years given in various issues of *Annual Abstract of Statistics*, total levels of car stock were estimated for these years.

(b) *Home demand*

Home demand was derived from the forecast levels of car stock in successive years in the way described above (page 44, section (b)).

APPENDIX III. PROSPECTS FOR EXPORT DEMAND

Table 27. Shares of other main car exporters in Britain's main export markets outside North America

Percentage share of combined exports of seven main exporting countries[a]

	United States		France		West Germany		Italy		Others[b]	
	1954–1955	1959–1960	1954–1955	1959–1960	1954–1955	1959–1960	1954–1955	1959–1960	1954–1955	1959–1960
Markets where Britain has a substantial preference[c]										
New Zealand	2.7	0.4	0.4	1.9	2.9	5.4	—	0.7	3.5	3.0
Federation of Rhodesia and Nyasaland[d]	0.6	1.1	—	6.8	0.5	17.0	0.4	2.1	0.1	1.7
British West Indies[e]	4.8	1.8	0.4	3.1	2.2	12.0	—	2.8	3.2	4.9
Malaya[f]	2.2	0.3	1.2	9.6	4.6	21.7	13.9	7.6	2.5	2.6
Australia	0.8	1.4	4.0	11.8	5.1	28.0	1.2	3.5	2.5	3.7
Irish Republic	0.6	0.2	0.8	4.9	13.0	14.2	4.1	2.5	0.1	—
Ceylon	1.2	0.3	8.8	9.7	13.9	18.4	7.1	6.6	0.2	0.3
Other markets										
Austria	0.5	0.3	9.5	14.2	59.4	67.8	25.5	11.4	0.1	0.2
Belgium/Luxemburg	21.9	5.4	20.7	37.6	39.0	42.4	3.2	3.8	0.3	1.1
British East Africa[g]	0.6	0.7	7.6	24.8	19.1	31.6	9.5	7.0	0.3	0.8
Denmark	7.3	1.7	6.8	11.4	50.5	58.7	3.5	4.4	3.1	8.4
Finland	9.9	2.5	25.0	28.1	29.7	41.2	5.4	7.3	9.4	6.4
France	35.1	5.6	—	—	34.1	53.2	5.4	23.3	0.3	0.6
Ghana[g]	5.1	3.5	4.7	12.8	29.9	47.7	2.2	4.9	0.1	3.5
India	35.9	10.0	0.3	0.5	0.9	1.5	30.0	57.1	0.1	0.2
Iran	53.9	14.5	2.1	9.7	24.0	54.4	7.4	3.6	0.5	2.2
Iraq	58.1	23.1	3.0	0.7	15.1	39.6	2.3	4.0	—	3.0
Italy	10.2	3.9	18.4	29.7	51.4	50.0	—	—	0.2	0.2
Japan	12.8	20.0	31.9	4.0	8.8	50.6	0.5	0.2	0.1	0.6
Mexico	89.4	31.5	0.6	18.1	3.7	29.0	4.5	4.4	—	2.6
Netherlands	8.6	3.2	7.7	15.6	51.5	50.9	5.1	8.0	0.4	1.7
Nigeria[g]	7.4	3.8	3.4	13.8	21.7	31.8	1.7	5.7	0.4	2.4
Norway	4.4	0.8	3.3	9.2	55.6	56.3	3.7	2.2	3.1	13.4
Pakistan	32.6	6.1	4.0	4.2	12.9	40.5	3.5	9.2	2.7	0.2
Portugal	4.9	0.9	12.2	19.8	54.7	51.0	9.3	12.6	0.9	1.7
South Africa	25.4	7.7	4.1	8.6	12.5	39.2	1.4	4.3	8.2	5.5
Sweden	8.0	2.3	7.6	9.3	49.3	70.9	4.7	2.5	0.1	—
Switzerland	9.7	3.6	12.8	25.1	57.4	52.4	12.4	10.4	0.2	1.9
Thailand	22.4	3.8	6.4	12.0	20.4	40.5	18.5	10.1	1.3	2.9
Venezuela	87.1	40.9	1.9	10.3	4.7	30.5	1.1	3.7	0.3	2.5
West Germany	3.9	0.5	17.6	36.4	—	—	55.7	57.9	0.1	1.0

Source : Society of Motor Manufacturers and Traders Yearbooks.

(a) Britain, France, Germany, Italy, Sweden, United States, Canada.
(b) Canada and Sweden.
(c) Countries are arranged approximately in descending order of Commonwealth preference (including the effects of taxes and duties other than tariffs).
(d) Nyasaland is excluded in 1954.
(e) Includes Bahamas, Bermuda, British Guiana and British Honduras.
(f) Includes Singapore and British Borneo territories.
(g) French exports are partly estimated.

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STATISTICAL APPENDIX

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Symbols and conventions used

.. = not available.

— = nil or less than half the final digit shown.

billion = thousand millions.

Items may not always add to totals, because of rounding.

A horizontal bar across a column indicates a discontinuity in the series.

Italics are used where NIESR has added estimates to figures published elsewhere—for instance, when an estimated later figure is added.

Table 1. Gross domestic product

Seasonally adjusted

	Final expenditure at market prices						*Less* Imports of goods and services	*Less* Adjustment to factor cost (*c*)	Statistical discrepancy	Gross domestic product at factor cost	Output				
	Consumers' expenditure (*a*)	Public authorities' current spending	Gross fixed investment (*b*)	Value of physical stock change	Exports of goods and services	Total final expenditure					Gross domestic product	Industrial production (*d*)	Agriculture, etc.	Transport, communication	Distribution, other services
	£ million, 1954 prices, quarterly averages										*Index numbers, 1954 = 100*				
48	2,677	592	467	+ 59	656	4,451	738	449	+ 68	3,332	85	79.0	84	87	90
49	2,735	632	510	+ 9	729	4,615	795	455	+ 90	3,455	88	83.6	90	89	91
50	2,829	637	525	− 60	920	4,851	897	464	+ 72	3,562	91	88.3	92	92	94
51	2,792	688	526	+141	910	5,057	971	484	+ 35	3,637	93	91.3	94	96	94
52	2,779	762	529	+ 10	893	4,973	898	468	+ 2	3,609	92	89.2	97	96	94
53	2,895	785	587	+ 33	913	5,213	961	489	− 9	3,754	96	94.3	99	98	97
54	3,030	784	636	+ 14	962	5,426	992	515	—	3,919	100	100.0	100	100	100
55	3,140	766	666	+ 72	1,025	5,669	1,103	535	+ 29	4,060	104	105.1	99	102	103
56	3,173	769	703	+ 65	1,070	5,780	1,103	534	− 48	4,095	105	105.6	105	104	103
57	3,249	745	736	+ 58	1,088	5,876	1,138	541	− 26	4,171	106	107.5	107	104	105
58	3,330	737	739	+ 27	1,065	5,898	1,147	569	− 9	4,173	107	106.3	105	103	108
59	3,471	752	795	+ 42	1,097	6,157	1,247	616	+ 91	4,385	112	112.6	110	107	113
60	3,599	769	870	+134	1,152	6,524	1,393	659	+140	4,612	118	120.3	114	112	117
58 I	3,323	747	755	+ 29	1,077	5,931	1,127	563	− 48	4,193	107	107	106	103	107
II	3,319	735	748	− 18	1,025	5,809	1,091	574	+ 29	4,173	106	106	106	103	107
III	3,336	746	750	+ 65	1,088	5,985	1,158	570	− 76	4,181	106	105	105	103	108
IV	3,409	732	752	+ 37	1,077	6,007	1,176	568	− 26	4,237	107	107	105	104	109
59 I	3,406	737	763	− 21	1,046	5,931	1,202	590	+109	4,248	108	108	105	104	111
II	3,503	757	790	+ 33	1,087	6,170	1,225	610	+ 11	4,346	111	111	105	106	112
III	3,468	763	807	+ 60	1,113	6,211	1,235	620	+ 57	4,413	113	114	115	108	113
IV	3,551	755	828	+ 98	1,139	6,371	1,332	620	+115	4,534	116	117	115	110	115
60 I	3,593	784	861	+ 85	1,178	6,501	1,362	645	+ 99	4,593	117	120	115	112	116
II	3,632	771	856	+175	1,145	6,579	1,383	655	+ 76	4,617	118	121	115	111	117
III	3,593	746	892	+135	1,140	6,506	1,403	655	+173	4,621	118	121	114	111	117
IV	3,597	799	881	+166	1,145	6,588	1,432	655	+120	4,621	118	120	114	113	117
61 I	3,665	836	932	+ 63	1,187	6,683	1,473	645	+ 91	4,656	119	121	114	115	118
II	*3,695*				*1,195*		*1,410*			*4,700*	*120*	123	*114*	*114*	*119*

(a) For details see table 11. (b) For details see table 12. (c) Net indirect taxes at 1954 rates. (d) For details see table 2. For explanations, see page 63.

Table 2. Production in industry

Index numbers, 1954 = 100, seasonally adjusted

	Total industrial production	Total manufacturing	Metals, metal-using				Textiles	Clothing	Chemicals	Paper-printing	Food, drink, tobacco	Other manufacturing	Mining	Construction	Electricity, gas, water
			Total	Engineering	Vehicles	Shipbuilding									
Weights	1,000	760	374	164	78	22	77	33	63	53	82	79	72	120	48
948	79.0	77.3	75.6	69.4	61.4	116.5	85.5	88.2	68.0	65.8	87.4	77.6	90.8	86.7	69.0
949	83.6	82.2	80.0	75.9	71.2	106.1	92.1	96.6	70.2	75.1	90.9	82.0	93.8	90.7	73.8
950	88.3	87.8	85.1	84.5	76.4	93.5	100.1	101.2	79.7	86.5	90.1	88.4	94.8	90.8	80.4
951	91.3	91.6	90.3	90.5	79.9	96.2	99.8	95.7	83.7	91.3	93.1	93.1	98.0	87.3	85.5
952	89.2	88.2	91.3	92.4	79.5	99.2	81.9	91.7	79.6	76.7	94.7	86.2	99.3	90.0	88.1
953	94.3	93.7	93.4	93.6	90.4	105.1	97.4	100.3	89.1	85.7	98.5	92.6	98.8	96.3	92.5
954	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
955	105.1	106.4	109.6	107.4	114.6	108.5	97.5	103.7	106.2	107.7	102.7	104.5	99.0	100.3	105.4
956	105.6	105.9	108.3	107.0	107.2	117.4	96.4	105.8	110.6	106.3	105.5	100.3	99.2	105.8	110.2
957	107.5	108.3	111.4	111.0	114.9	107.9	96.5	105.1	115.0	109.1	106.9	101.4	98.5	105.5	114.3
958	106.3	106.9	110.3	111.5	118.4	108.8	87.1	101.5	115.0	111.2	109.4	100.1	94.3	105.0	119.2
959	112.6	114.1	116.7	118.2	129.0	101.0	92.0	111.7	131.2	116.9	113.6	107.5	91.8	111.3	123.2
960	120.3	122.9	126.6	127.0	139.2	91.9	95.5	120.0	145.2	132.5	117.4	114.8	89.1	117.6	133.2
959 I	108	108	110	111	124	107	86	105	125	115	112	102	91	110	121
II	111	113	116	117	129	101	91	107	131	115	114	107	94	109	122
III	114	115	117	121	122	100	94	115	133	113	115	110	92	112	122
IV	117	120	125	124	141	97	97	119	137	125	113	111	91	114	128
960 I	120	122	127	127	145	94	94	113	140	129	116	114	91	116	131
II	121	124	128	127	143	93	96	119	144	133	117	116	88	117	128
III	121	123	127	126	139	91	96	121	149	132	117	116	89	118	134
IV	120	122	124	128	130	89	96	127	147	136	119	113	88	120	140
961 I	121	123	125	130	132	93	92	118	148	135	122	115	86	123	135
II	123	125	129	137	137	93	94	122	149	133	120	118	87	126	138
April	122	125	128	135	136	95	94	126	147	138	121	118	87		134
May	122	124	127	133	138	94	92	118	149	132	120	116	88		140
June	124	126	132	142	138	91	95	122	151	130	118	120	87		140
July	125	127	133	141	139	91	95	131	154	135	121	115	88		141

Table 3. The metals and engineering industries

Quarterly rates, seasonally adjusted

	Steel		Passenger cars			Commercial vehicles output	Selected consumer durables	Deliveries of plant and machinery(a)	
	Output	Consumption	Output	New registrations	Exports			Electrical	Other
	000 tons ingot equivalent		*thousands*			*'000*	*1954 = 100*	*£ million*	
1948	3,719	3,353	84	28	57	43	37	..	..
1949	3,888	3,550	103	38	65	54	44	..	..
1950	4,073	3,710	131	33	99	65	67	..	..
1951	3,910	3,772	119	36	92	64	79	..	..
1952	4,104	3,825	112	47	78	60	63	..	..
1953	4,402	3,915	149	74	77	60	76	..	..
1954	4,630	4,190	192	97	94	67	100	..	..
1955	4,948	4,470	224	126	97	85	111	..	..
1956	5,165	4,617	177	100	84	74	88	..	..
1957	5,425	4,655	215	107	106	72	105	..	..
1958	4,892	4,459	263	139	121	78	118	72	325
1959	5,047	4,472	297	162	142	93	163	74	336
1960	6,076	5,067	338	202	142	114	144	78	369
1959 I	4,468	4,130	255	151	119	77	141	68	320
II	4,915	4,525	293	158	142	91	173	73	346
III	5,070	4,514	282	149	140	100	171	72	321
IV	5,733	4,726	360	188	169	102	166	83	358
1960 I	6,011	4,875	384	222	181	108	170	77	362
II	6,002	5,177	380	220	162	117	161	77	369
III	6,065	5,127	347	216	127	118	137	72	350
IV	6,227	5,091	242	148	99	116	111	86	395
1961 I	6,010	5,003	210	207	84	119	115	82	394
II	5,866	5,128	266	208	84	120	122	89	425
March	5,822		255	228	72	121			
April	5,889		238	200	86	121			
May	5,885		274	202	72	120			
June	5,826		285	224	94	120			
July	5,792		317	215	93	128			
August	4,954		222	201	97	105			

(a) Unadjusted.

Table 4. Energy

Quarterly rates, seasonally adjusted

	Inland consumption			Electricity generated(c)
	Coal	Oil(a)	Total primary fuel(b)	
	million tons			bn.kWh
1948	48.1	3.2	53.1	11.5
1949	48.7	3.4	53.7	12.2
1950	50.4	3.8	56.2	13.6
1951	52.5	4.2	58.1	14.9
1952	51.9	4.4	57.8	15.5
1953	52.0	4.7	58.7	16.4
1954	53.5	5.3	61.3	18.2
1955	53.7	5.8	62.4	22.8
1956	54.3	6.3	63.3	24.6
1957	53.2	6.2	61.6	25.7
1958	50.5	7.8	62.0	27.5
1959	47.4	9.1	61.3	29.4
1960	49.2	10.7	*66.0*	33.3
1959 I	49.3	8.5	62.6	28.4
II	46.8	9.1	60.4	29.2
III	45.5	9.1	59.2	29.3
IV	47.8	9.7	63.1	30.8
1960 I	49.7	10.3	66.5	32.2
II	46.9	10.4	62.6	32.3
III	49.0	10.6	65.4	33.7
IV	51.3	11.3	69.5	34.9
1961 I	48.6	11.4	67.1	34.1
II	47.3	11.3	64.9	35.3
March	45.8	11.4	63.8	33.6
April	45.9	10.5	62.1	34.3
May	47.8	11.7	66.0	35.6
June	48.3	11.8	66.6	35.9
July	47.3	10.7	64.4	35.6

(a) Deliveries to consumers. (b) In coal equivalent. (c) Great Britain. Before 1955 excluding generation outside the public system.

Table 5. New orders and orders on hand

	Engineering(a)						Machine tools(d)		Shipbuilding		Textiles and clothing		Factory building approvals (i)	Housing starts (j)	Architects new work (k)
	Total		For export		For home market		Net new orders, £ mn(e)		Merchant vessels, 000 gross tons		Net new orders (g)	Orders on hand (h)			
	Net new orders (b)	Orders on hand (c)	Net new orders (b)	Orders on hand (c)	Net new orders (b)	Orders on hand (c)	Total	For home market	New orders (e)	Orders on hand(f)				'000	1959 = 100
1954	..	97	..	93	..	99	18.6	13.9	159	4,333	..	..	17.7	84.1	..
1955	..	106	..	96	..	109	23.6	18.8	582	5,287	..	..	22.8	79.6	..
1956	..	104	..	103	..	105	20.9	15.3	619	6,442	..	..	17.8	71.2	..
1957	..	101	..	101	..	101	18.8	13.6	420	6,828	..	..	15.9	70.4	..
1958	91	88	89	86	92	89	14.9	10.6	124	5,430	..	..	11.4	66.0	84
1959	107	90	104	88	108	90	20.1	15.5	80	4,169	..	135	14.5	81.3	100
1960	125	104	121	103	126	104	36.1	27.6	157	3,348	102	136	22.3	79.0	125
1959 I	99	87	96	84	100	88	15.5	11.3	55	5,103			16.1	83	108
II	109	87	104	84	110	88	19.8	16.4	44	4,734	105	107	13.7	80	90
III	100	87	97	84	101	88	21.2	16.4	48	4,473	108	119	12.7	80	92
IV	121	90	121	88	120	90	23.8	17.9	172	4,169	122	135	15.7	82	110
1960 I	137	97	129	95	140	98	39.9	30.9	196	4,044	106	135	35.8	76	147
II	120	99	115	97	122	100	36.4	29.1	158	3,780	103	137	19.4	84	109
III	119	104	118	102	119	104	35.3	26.2	63	3,494	89	130	17.9	78	111
IV	122	104	124	103	121	104	32.7	24.3	210	3,348	112	136	16.2	78	133
1961 I	144	112	132	107	149	113	33.0	25.0	131	3,080	95	128	16.4	84	110
II	121	110	115	105	124	112	34.0	23.9	211	2,962	94	123	10.5	82	99
March	160	112	148	107	165	113	34.3	26.1			94	128			
April	133	113	104	106	144	115	29.3	21.4			98	128			
May	123	113	121	107	124	116	36.4	25.8			91	125			
June	109	110	117	105	106	112	36.3	24.5			94	123			
July	139	112	164	111	130	112					73	116			

(a) Including certain heavy vehicles. (b) Adjusted for the lengths of calendar months, average deliveries 1958 = 100, at 1958 prices. (c) At end of period, January 1958 = 100, at 1958 prices. (d) These are included in the previous columns. (e) Quarterly rates. (f) At end of period. (g) Adjusted for the lengths of calendar months, average deliveries 1959 = 100, at 1958 average prices. (h) At end of period, April 1959 = 100, at 1958 average prices. (i) Area, mn. sq. ft.; Gt. Britain only; quarterly rates, seasonally adjusted. (j) Quarterly rates, seasonally adjusted. (k) At 1954 prices.

Table 6. The labour market

Seasonally adjusted

	Employment											Demand for labour			Net overtime per head in manufacturing (*b*)
	Total civil employees	Agriculture etc.	Transport, communication	Distribution and other services	Total industrial production	Construction	Mining	Total manufacturing	Metals, metal-using	Textiles	Other industries	Unemployment	Unfilled vacancies	Excess demand (*a*)	
	Index numbers, 1954 = 100											*Percentage of employees*			*Weekly hours*
Millions in 1954	21.07	0.72	1.67	7.30	11.38	1.31	0.87	8.83	4.31	0.99	3.90				
1949	95.1	109.4	103.5	94.6	93.3	98.3	100.5	92.0	90.0	97.8	92.6	1.52	1.95	0.42	..
1950	96.5	111.0	103.1	95.3	95.3	98.4	98.0	94.6	91.8	102.1	95.8	1.53	1.77	0.27	..
1951	97.5	106.4	102.2	95.8	97.3	98.9	98.4	97.0	94.5	103.4	98.0	1.19	2.01	0.69	..
1952	97.4	104.0	102.0	96.4	96.9	97.8	100.6	96.2	96.9	93.8	96.4	1.99	1.34	−0.27	1.0
1953	98.0	101.1	100.7	97.3	97.9	98.6	100.8	97.4	97.1	98.2	97.8	1.64	1.33	−0.04	1.8
1954	100.0	100 0	100 0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1.34	1.56	0.29	2.0
1955	101.3	97.8	99.3	100.8	102.2	102.0	99.4	102.6	104.6	96.6	101.7	1.08	1.91	0.73	2.1
1956	102.1	91.6	99.5	102.4	102.9	105.0	99.1	103.1	105.9	94.4	101.9	1.19	1.66	0.46	1.9
1957	102.5	91.2	99.9	103.4	103.0	104.3	100.1	103.1	109.0	93.7	102.0	1.43	1.27	0.01	1.9
1958	101.8	89.5	98.6	104.3	101.5	102.3	98.7	101.7	105.5	87.9	101.0	2.10	0.90	−0.67	1.4
1959	102.4	88.0	97.0	106.2	101.5	103.3	94.5	102.1	105.9	85.7	101.8	2.17	1.02	−0.62	1.9
1960	104.4	85.6	96.7	108.1	104.1	106.3	87.6	105.9	111.4	85.4	104.5	1.60	1.40	−0.08	2.3
1960 I	103.5	86.3	96.4	107.0	103.1	105.2	90.3	104.4	109.4	85.3	103.4	1.70	1.28	−0.15	2.2
II	104.0	85.0	96.4	107.6	103.9	105.8	88.1	105.6	111.1	85.4	104.2	1.56	1.41	−0.07	2.4
III	104.8	84.4	96.6	108.6	104.7	106.9	86.5	106.7	112.4	85.5	105.2	1.55	1.45	−0.05	2.4
IV	105.2	86.7	97.5	109.1	104.8	107.4	85.7	106.7	112.5	85.5	105.3	1.59	1.46	−0.05	2.3
1961 I	105.1	82.9	97.8	108.9	104.9	108.8	85.3	106.6	112.4	84.9	105.3	1.49	1.46	−0.02	2.2
II	105.3	80.6	97.9	109.4	105.1	108.5	84.2	107.2	113.2	84.8	105.6	1.36	1.52	0.03	2.1
March	105.2	82.0	97.9	109.1	105.0	109.6	84.9	106.8	112.6	84.9	105.4	1.40	1.49	0.02	
April	105.2	80.7	97.9	109.3	105.0	108.6	84.7	107.0	113.0	84.8	105.6	1.41	1.48	0.02	
May	105.3	80.7	98.0	109.3	105.1	108.5	84.2	107.1	113.2	84.7	105.5	1.33	1.55	0.04	
June	105.4	80.3	97.9	109.7	105.2	108.3	83.8	107.4	113.5	84.8	105.8	1.33	1.53	0.04	
July	105.6	79.5	98.0	110.1	105.2	107.3	83.5	107.5	113.7	84.8	105.9	1.36	1.51	0.03	
August												1.52	1.44	−0.03	
Sept.												1.57	1.44	−0.04	

(a) NIESR index based on unemployment and vacancies. (b) Not seasonally adjusted.

Table 7. Unemployment by industry

Percentage of total employees, seasonally adjusted

	Metals, metal-using	Textiles	Construction	Mining	Transport, services	Other
1949	1.34	0.66	2.90	0.30	1.72	1.28
1950	1.18	0.60	2.83	0.33	1.80	1.37
1951	0.83	0.83	2.05	0.26	1.46	1.15
1952	1.17	8.44	2.83	0.26	1.86	1.79
1953	1.33	1.35	2.86	0.28	1.86	1.46
1954	0.92	0.92	2.50	0.25	1.58	1.23
1955	0.63	1.64	1.76	0.19	1.27	1.01
1956	0.94	1.41	2.01	0.21	1.30	1.09
1957	1.07	1.13	2.83	0.31	1.60	1.29
1958	1.76	3.96	4.00	0.57	2.09	1.82
1959	1.79	2.70	4.63	0.98	2.15	1.89
1960	1.13	1.63	3.09	0.84	1.76	1.29
1959 I	2.21	4.37	4.73	0.84	2.16	2.04
II	1.97	2.70	4.50	0.95	2.18	1.90
III	1.56	1.86	4.78	1.04	2.23	1.87
IV	1.42	1.88	4.49	1.10	2.05	1.76
1960 I	1.11	1.92	3.11	0.91	1.91	1.38
II	0.97	1.61	3.16	0.86	1.77	1.26
III	1.00	1.43	3.12	0.82	1.74	1.26
IV	1.45	1.55	2.96	0.76	1.63	1.28
1961 I	1.60	1.38	2.25	0.61	1.59	1.09
II	1.03	1.05	2.64	0.58	1.55	1.04
March	1.27	1.25	2.23	0.61	1.58	1.02
April	1.13	1.07	2.65	0.62	1.58	1.07
May	1.03	1.04	2.62	0.58	1.52	1.01
June	0.95	1.03	2.64	0.55	1.54	1.05
July	0.95	0.99	2.83	0.59	1.59	1.05
August	0.97	1.17	3.06	0.61	1.75	1.16

Table 8. Productivity

Index numbers, 1954 = 100, seasonally adjusted

	Output per person employed in						Output per man-hour worked (*a*)
	gross domestic product	total industrial production	total manufacturing	metals, metal-using	textiles	mining	
1949	92	90	89	89	94	93	92
1950	95	93	93	93	98	97	94
1951	95	94	94	96	97	100	96
1952	94	92	92	94	87	99	93
1953	97	96	96	96	99	98	97
1954	100	100	100	100	100	100	100
1955	102	103	104	105	101	100	103
1956	103	103	103	102	102	100	103
1957	105	104	105	102	103	98	106
1958	106	105	105	105	99	96	107
1959	111	111	112	110	107	97	112
1960	115	116	116	114	112	102	118
1959 I	108	107	107	105	101	94	109
II	110	110	111	110	106	98	112
III	111	111	112	110	108	98	113
IV	114	114	115	116	112	99	116
1960 I	115	116	117	116	112	100	117
II	115	116	117	115	112	100	119
III	115	115	115	113	112	103	119
IV	114	115	115	111	110	103	118
1961 I	115	115	115	112	108	101	119
II	*116*	117	117	114	111	104	120
March		116	116	112	111	100	
April		117	117	114	111	103	
May		116	115	112	109	104	
June		118	118	116	112	104	
July		119	119	117	112	106	

(a) In manufacturing.

Table 9. Prices

Index numbers, 1954 = 100

	Capital goods				Export prices	Retail prices	Consumer goods and services								Total final prices
	All assets	Plant, vehicles, etc.	Dwellings	Other building			Total	Food	Drink, tobacco	Housing (inc. rent and rates)	Durable goods	Clothing	All other goods	Services	
1949	79	78	80	81	81	77.8	81.2	70.7	98.1	80.9	83.6	85.6	83.6	81.3	80.3
1950	81	81	81	81	85	79.9	83.4	74.7	97.0	83.1	86.8	86.6	85.7	84.0	82.7
1951	89	87	94	91	100	87.6	91.2	83.4	98.3	88.4	98.9	100.4	95.4	90.1	92.6
1952	99	97	104	100	105	95.3	96.7	93.1	99.6	92.5	106.3	100.1	100.5	95.4	98.4
1953	100	100	101	100	101	98.3	98.2	96.3	99.8	97.2	102.3	99.2	99.3	97.9	98.8
1954	100	100	100	100	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1955	105	104	106	106	102	104.5	103.4	106.0	100.5	103.5	101.2	100.6	103.1	104.0	103.6
1956	111	110	111	111	106	109.7	108.0	110.2	103.9	107.6	108.5	102.5	109.2	110.0	108.9
1957	115	116	113	115	111	113.8	111.1	112.2	106.3	114.8	110.3	104.1	113.5	114.1	112.8
1958	119	120	115	119	110	117.2	113.9	113.3	108.6	128.6	110.2	105.0	115.6	118.9	115.3
1959	118	120	112	117	109	117.8	114.5	114.7	106.3	135.6	108.1	104.5	115.4	120.8	115.9
1960	118	121	113	117	111	119.1	115.4	114.4	107.6	140.7	107.4	106.2	115.2	124.1	117.2
1959 I	118	120	112	117	109	118.6	115.3	115.3	108.5	134.0	110.3	104.1	116.2	119.6	116.4
II	117	119	112	117	109	117.5	114.5	116.0	105.4	134.8	107.4	104.4	115.1	120.1	115.9
III	118	119	113	118	108	117.2	114.3	113.8	105.4	136.0	106.8	104.8	115.7	121.3	115.7
IV	117	119	111	117	110	118.1	114.2	115.6	106.3	136.7	106.5	104.6	114.6	121.4	115.7
1960 I	115	118	110	115	111	118.1	114.8	114.5	105.8	137.5	106.7	105.6	115.5	121.9	115.9
II	116	119	111	116	111	118.8	115.7	116.7	108.2	139.9	107.2	105.8	114.2	123.3	117.0
III	118	121	113	117	111	119.0	115.4	113.8	108.0	140.6	107.6	106.4	114.5	124.0	117.0
IV	119	121	114	117	111	120.3	115.8	115.0	108.1	142.9	107.9	106.7	116.0	123.9	117.7
1961 I	119	121	115	117	112	120.9	116.6	115.6	107.6	143.2	108.2	106.8	117.1	124.3	118.7
II						122.4			108.9	144.8		107.5			
February					112	120.8	*116.5*	*115.6*	*107.6*	*143.2*	*108.3*	*106.8*	*116.3*	*124.2*	
March					112	121.2	*116.9*	*115.5*	*107.6*	*143.5*	*108.3*	*107.0*	*118.9*	*124.8*	
April					112	121.8	*117.6*	*116.1*	*108.6*	*144.3*	*108.5*	*107.4*	*119.2*	*125.7*	
May					112	122.2	*117.9*	*117.7*	*108.6*	*144.8*	*108.6*	*107.5*	*116.7*	*126.0*	
June					112	123.2	*118.9*	*119.8*	*109.6*	*145.2*	*108.8*	*107.6*	*117.1*	*126.2*	
July					112	123.2	*118.9*	*119.0*	*111.0*	*145.4*	*108.8*	*107.7*	*117.2*	*126.4*	
August					112	124.4	*120.0*	*118.2*	*118.0*	*145.8*	*109.7*	*107.9*	*118.1*	*127.3*	

For explanations, see page 63.

Table 10. Wages, profits and other costs

Index numbers, 1954 = 100

	Weekly wage rates	Wage rates by industry						Income from employment(a)		Profits of companies and public corporations(a)	All property income(a)		Import prices	Materials used in manufacturing industry	Prices of all manufactured products
		Metals, metal-using	Textiles	Mining	Construction	Agriculture, forestry, fishing	Other industries and services	Total	Per unit of output		Total	Per unit of output			
1949	76.7	76.0	77.0	74.7	74.7	77.8	76.9	70.4	80.4	68.2	73.1	83.4	74	..	..
1950	78.1	76.9	79.4	75.5	76.6	79.0	78.4	74.1	81.5	79.2	81.4	89.5	85	..	..
1951	84.6	83.5	87.1	83.3	83.0	84.5	84.7	82.5	88.9	93.6	90.0	97.0	113	..	..
1952	91.6	91.5	93.0	92.4	90.5	91.7	91.6	88.7	96.3	83.8	85.2	92.5	111	..	..
1953	95.8	95.8	96.7	95.5	95.4	95.9	95.9	93.7	97.8	89.8	91.1	95.1	101	..	..
1954	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100	100.0	100.0
1955	106.9	106.8	104.9	107.3	106.2	105.6	106.3	109.3	105.5	109.7	107.2	103.5	103	103.0	102.6
1956	115.4	115.5	110.6	117.7	114.2	113.8	114.7	119.2	114.1	112.6	111.1	106.3	105	106.7	107.0
1957	121.2	121.1	114.9	124.1	120.5	119.1	120.6	126.0	118.4	117.4	116.0	109.0	107	107.4	110.4
1958	125.4	125.4	118.5	126.6	125.5	126.4	125.4	130.8	122.8	114.9	118.3	111.1	99	100.8	111.1
1959	128.7	129.0	120.6	130.4	128.9	130.6	128.7	136.6	122.1	128.5	128.8	115.1	98	101.7	111.5
1960	132.1	130.9	125.6	131.7	132.4	133.9	132.9	147.4	125.2	140.9	138.5	117.7	99	101.8	113.0
1960 I	130.5	130.1	122.5	130.6	129.2	131.8	130.8	141.3	121.0	148.2	141.2	120.9	100	103.0	111.9
II	131.8	130.8	125.7	130.6	132.2	134.5	132.0	145.8	123.9	144.0	140.0	118.9	99	102.5	112.9
III	132.5	131.0	126.5	131.7	133.8	134.5	133.2	148.4	126.2	139.6	138.3	117.6	98	101.0	113.5
IV	133.5	131.8	127.6	133.8	134.2	134.7	135.4	149.2	126.5	135.1	136.9	116.1	99	100.9	113.8
1961 I	136.1	135.4	129.9	139.3	135.9	141.6	136.6	152.9	129.4	143.7	142.4	120.5	97	100.7	114.7
II	137.0	136.4	131.7	139.4	136.5	141.9	137.9	*154.3*	128.7				98	101.2	115.5
March	136.3	136.2	130.9	139.3	136.5	141.9	136.8						97	100.9	115.1
April	136.7	136.3	131.5	139.3	136.5	141.9	137.3						98	101.5	115.2
May	136.9	136.3	131.7	139.4	136.5	141.9	137.9						99	101.5	115.5
June	137.5	136.5	131.8	139.4	136.5	141.9	138.6						98	100.7	115.8
July	137.7	136.6	132.1	139.4	136.5	141.9	139.1						97	100.6	116.0
August	137.7												95	100.8	116.9

(a) Seasonally adjusted.

For explanations, see page 63.

Table 11. Personal income and expenditure

£ million, quarterly averages, seasonally adjusted

	Disposable income	Total personal savings	Consumers' expenditure	Consumers' expenditure											
				Total	Food	Alcoholic drinks	Tobacco	Housing (inc. rent and rates)	Fuel, light	Clothing	Durable goods			All other goods	Services
											Cars, motor cycles	Furniture, etc.	Radio, electric, etc.		
	at current prices			*at 1954 prices*											
1950	2,386	26	2,360	2,829	901	198	196	239	113	307	19	77	45	271	466
1951	2,580	34	2,546	2,792	884	204	202	239	117	278	19	71	50	263	465
1952	2,795	107	2,688	2,779	875	202	206	244	116	274	25	62	48	265	463
1953	2,969	125	2,843	2,895	907	205	209	252	117	281	43	70	60	288	465
1954	3,136	107	3,030	3,030	935	205	214	263	122	301	59	77	74	311	472
1955	3,414	168	3,246	3,140	962	215	219	255	124	322	79	72	82	338	472
1956	3,676	249	3,427	3,173	985	220	222	257	129	336	61	70	74	347	472
1957	3,858	251	3,608	3,249	1,004	224	228	260	127	346	71	75	82	356	476
1958	4,001	208	3,793	3,330	1,017	224	233	264	137	345	93	80	90	377	472
1959	4,224	251	3,973	3,471	1,039	238	238	266	136	360	118	88	107	401	481
1960	4,526	374	4,152	3,599	1,062	252	245	269	149	384	135	84	99	432	489
1958 I	4,013	239	3,774	3,323	1,025	229	231	266	137	341	82	78	87	367	480
II	4,014	229	3,785	3,319	1,022	221	235	267	139	341	88	76	86	364	480
III	4,041	223	3,818	3,336	1,030	220	232	268	132	347	85	79	85	374	484
IV	4,101	202	3,899	3,409	1,035	225	232	269	139	352	101	88	100	381	487
1959 I	4,133	206	3,927	3,406	1,040	222	230	269	139	350	94	85	101	388	488
II	4,261	279	3,982	3,503	1,054	239	240	269	135	362	113	91	115	394	491
III	4,266	288	3,978	3,468	1,049	239	241	271	130	353	109	89	112	386	489
IV	4,329	260	4,069	3,551	1,047	250	239	271	138	375	145	88	99	409	490
1960 I	4,393	269	4,124	3,593	1,063	240	246	273	144	372	147	91	112	415	490
II	4,558	378	4,180	3,632	1,067	257	248	274	141	387	148	88	108	420	494
III	4,589	436	4,153	3,593	1,063	251	245	275	151	386	135	80	91	421	495
IV	4,583	400	4,183	3,597	1,082	260	242	277	155	392	99	76	85	434	495
1961 I	4,732	460	4,272	3,665	1,073	272	252	278	149	389	119	84	96	449	504
II	*4,790*	*467*	*4,323*	*3,697*	*1,089*	270	260	279	*142*	383	*132*	84	106	*450*	*502*

For explanations, see page 63.

Table 12. Fixed investment

£ million, 1954 prices, quarterly averages, seasonally adjusted

	Dwellings			Industries and services											Commercial vehicles: new registrations
					By type of asset			By sector		By industry(*a*)					
	Total	Public	Private	Total	Plant, machinery	Vehicles, ships, aircraft	Buildings, works	Public	Private	Manufacturing (*b*)	Fuel, power (*c*)	Public services (*c*)	Transport, communications(*c*)	Other industries services (*b*) (*c*)	'000
1950	525	86	16	423	199	83	141	167	256	140	70	42	46	112	24
1951	526	84	16	426	215	74	137	188	238	148	70	45	41	109	23
1952	529	95	24	410	204	66	139	197	213	142	73	44	39	102	22
1953	587	114	42	431	207	78	146	213	218	138	81	46	44	112	26
1954	636	105	57	474	230	83	161	220	255	145	96	48	48	127	29
1955	666	83	63	520	248	94	178	224	296	161	102	49	50	147	40
1956	703	75	67	561	255	104	202	235	326	189	97	57	58	149	39
1957	736	70	66	600	272	114	214	251	349	198	101	61	69	160	36
1958	739	59	70	610	274	115	220	254	356	188	105	66	67	172	44
1959	795	59	88	648	286	126	236	276	372	179	116	76	70	194	49
1960	871	61	106	704	297	143	264	289	415	210	112	82	77	209	58
1958 I	755	65	63	627	276	130	221	265	362	191	110	68	66	187	44
II	748	62	65	621	275	120	226	253	368	191	97	61	66	178	44
III	750	58	68	624	274	122	228	252	372	189	101	65	61	183	44
IV	752	56	73	623	278	119	226	253	370	182	111	69	74	198	45
1959 I	763	61	77	625	271	128	226	261	364	179	109	77	63	194	45
II	790	59	80	651	281	137	233	270	381	177	104	70	62	206	48
III	807	62	87	658	278	134	246	294	364	176	116	78	69	187	51
IV	828	61	93	674	288	130	256	304	370	184	135	80	86	204	53
1960 I	861	63	92	706	294	149	263	312	394	193	129	89	77	214	59
II	856	63	104	689	277	149	263	276	413	200	97	75	69	214	59
III	892	63	103	726	302	144	280	311	415	225	108	83	76	202	57
IV	881	62	105	714	299	142	273	291	423	220	117	87	83	218	58
1961 I	932	62	103	767	320	158	289	323	444	232	125	100	78	226	61
II										256					60

(a) Excluding legal fees, etc. (which are included in the other columns) of which the industry distribution is not known.
(b) Figures from 1956 onwards are on a business unit basis and are not fully comparable with those for earlier years.
(c) Not seasonally adjusted.

For explanations, see page 63.

Table 13. Contractors' orders and work done

£ million, 1954 prices, quarterly averages

	Total	New housing	Other new work		
			Public	Industrial	Miscellaneous
	Orders received by contractors				
1957	294	118	86	47	43
1958	276	115	81	40	40
1959(a) I	354	172	87	47	48
II	346	146	95	55	50
III	325	147	82	48	48
IV	380	161	107	60	52
1960 I	422	176	116	72	58
II	398	158	105	79	56
III	390	156	97	72	65
IV	415	170	108	74	63
1961 I	443	175	132	70	66
II	412	156	118	71	67
	Work done by contractors(b)				
1957	303	123	81	59	40
1958	301	114	88	57	42
1959(a) I	325	124	95	60	46
II	322	122	96	59	45
III	339	131	98	62	48
IV	339	134	93	62	50
1960 I	344	136	92	66	50
II	356	142	90	71	53
III	362	139	93	76	54
IV	373	140	96	79	58
1961 I	380	143	99	83	55
II	400	149	104	87	60

(a) From the beginning of 1959 the figures are given according to the Revised Standard Industrial Classification 1958.
(b) Seasonally adjusted.

Table 14. Changes in the volume of stocks

£ million, 1954 prices, quarterly averages, seasonally adjusted

	Total stocks	Manufacturing and distribution						
		Total	Manufacturing				Distribution	
			Total	Materials and fuel (a)	Work in progress (a)	Finished goods (a)	Wholesale	Retail
Value at end 1960 £ billion	9.1	6.8	5.1	2.1	1.7	1.3	0.8	0.9
1955	+ 72	..	+ 63	+26	+ 8	+29	..	+ 9
1956	+ 65	..	+ 55	+13	+25	+17	..	+ 4
1957	+ 58	+ 64	+ 43	+12	+19	+12	+11	+10
1958	+ 27	+ 20	+ 12	−21	+ 5	+28	+ 4	+ 4
1959	+ 42	+ 29	+ 14	+ 9	+ 6	− 1	+ 4	+11
1960	+134	+135	+115	+49	+30	+37	+11	+ 9
1957 I	+130	+105	+ 62	+36	+28	+43	+27	+16
II	+ 85	+ 67	+ 33	−30	+55	+28	+22	+12
III	+ 25	+ 50	+ 54	+38	+27	−32	− 7	+ 3
IV	+ 15	+ 35	+ 23	+ 3	−35	+11	+ 2	+10
1958 I	+ 29	+ 20	+ 23	−22	+18	+74	− 5	+ 2
II	− 18	− 25	− 3	−61	+17	+63	−18	− 4
III	+ 65	+ 61	+ 29	+14	+ 3	−15	+24	+ 8
IV	+ 37	+ 24	—	−13	−20	− 9	+15	+ 9
1959 I	− 21	− 33	− 41	− 3	− 3	+14	+15	− 7
II	+ 33	+ 8	− 25	− 1	+12	−15	—	+33
III	+ 60	+ 34	+ 35	+39	+12	−41	+ 2	− 3
IV	+ 98	+108	+ 87	− 1	+ 4	+39	—	+21
1960 I	+ 85	+ 81	+ 54	+29	+18	+56	− 1	+28
II	+175	+153	+110	+46	+57	+28	+11	+32
III	+135	+146	+95	+21	+ 2	+21	+21	−21
IV	+166	+161	+151	+25	+23	+61	+15	− 5
1961 I	+ 63	+ 70	+ 11	+18	+17	+25	+32	+27
II		+ 55	+ 26	− 6	+44	+14	+ 7	+22

(a) Unadjusted.

Table 15. Finance

£ million, quarterly rates

	Hire purchase			Bank advances(a)				Marketable debt of the public sector(a)				Short term interest on treasury bills, per cent	
								Treasury bills		Gilt-edged stocks			
	New credits extended	Repayments	Change in debt	Total	Industry and transport	Finance	Personal and professional	Banking	Private and overseas	Banking	Private and overseas	London	New York
£ mn., at end-1960	935(b)	..	..	3,570	1,334	462	682	1,038	..	1,488	..	..	..
1954	..	..	..	+ 54	+ 23	+ 9	+ 5	..	..	..	..	1.794	0.953
1955	..	..	..	+ 6	+ 8	0	− 4	+ 20	..	− 104	..	3.753	1.753
1956	..	..	..	− 13	+ 12	− 1	− 12	+ 2	..	− 15	..	4.945	2.658
1957	..	..	..	0	0	− 2	0	+ 35	− 37	+ 17	− 24	4.814	3.267
1958	161	134	+ 27	+ 73	+ 28	+ 7	+ 17	− 58	+ 66	+ 9	+ 26	4.563	1.839
1959	231	158	+ 73	+ 195	+ 45	+ 41	+ 49	+ 7	+ 29	− 112	+ 36	3.375	3.405
1960	206	184	+ 22	+ 142	+ 65	+ 16	+ 25	− 51	+ 40	− 125	+ 162	4.887	2.928
1960 I	240	180	+ 60	+ 242	+ 78	+ 54	+ 57	− 281	+ 18	− 236	− 38	4.397	3.943
II	230	183	+ 47	+ 213	+ 80	+ 35	+ 43	+ 10	+ 18	− 150	+ 167	4.706	3.092
III	182	186	− 4	+ 59	+ 26	− 2	+ 11	+ 46	+ 45	− 84	+ 327	5.566	2.390
IV	171	188	− 17	+ 55	+ 74	− 22	− 9	+ 23	+ 79	− 28	+ 190	4.851	2.361
1961 I	201	202	− 1	+ 147	+ 112	+ 7	+ 9	− 229	− 291	− 96	− 34	4.348	2.377
II	233	210	+ 23	+ 169	+ 61	+ 35	+ 14	+ *177*		− *103*(c)		4.445	2.325
III				+ 31	+ 10	+ 20	—						
April	219	204	+ 15					+ 353		− 222(c)		4.455	2.327
May	246	216	+ 30					− 1		− 21(c)		4.386	2.288
June	233	209	+ 24					+ 180		− 67(c)		4.495	2.359
July								+ 152		− 109(c)		5.121	2.268
August													

(a) Change in period. (b) All H.P. credits outstanding. (c) Excluding Northern Irish banks.

Table 16. Balance of payments : United Kingdom and sterling area

£ *million*

	U.K. current transactions				U.K. long-term capital		Balancing item	U.K. short-term capital, etc.					Sterling-area balance with non-sterling world		
								Overseas sterling holdings					U.K. current balance	Overseas sterling area	
								Countries		Non-territorial	Reserves (*a*)	Other short-term capital		Current balance	Net capital receipts
	Imports	Exports	Invisibles	Balance	Inter-Government etc.	Other		Sterling area	Other						
52	2,959	2,831	+355	+227	—	−180	+ 48	−103	−255	+ 1	+175	+ 87	−121	− 75	+257
53	2,896	2,677	+398	+179	− 31	−210	+ 45	+233	+ 41	− 56	−240	+ 39	+ 27	+146	+151
54	3,020	2,825	+399	+204	− 20	−220	+ 19	+107	+103	− 35	− 87	− 71	− 56	+ 22	+152
55	3,432	3,076	+264	− 92	− 53	−130	+119	− 58	− 69	− 7	+229	+ 61	−287	+ 7	+136
56	3,466	3,402	+256	+192	− 51	−190	+112	− 34	−120	+200(*b*)	− 42(*b*)	− 67	−154	+ 59	+158
57	3,570	3,543	+256	+229	+ 67 (*c*)	−250	+161	−122	− 27	− 24	− 13(*c*)	− 21	−131	−184	+141
58	3,357	3,392	+285	+320	− 49	−137	+ 66	− 89	+169	− 22	−284	+ 26	−177	−313	+362
59	3,609	3,509	+190	+ 90	−353 (*e*)	−126	+ 10	+185	− 31	+ 82(*d*) (*e*)	+119(*d*) (*e*)	+ 24	−215	+ 61	+215
60	4,110	3,712	+ 59	−339	−104	− 92	+364	−224	+604	−156	−177	+124	−644	−399	+366
59 I	857	841	+ 36	+ 20	− 19	− 33	+ 89	+ 55	− 71	− 85(*d*)	− 25(*d*)	+ 69	− 26	+ 16	+175
II	887	885	+ 77	+ 75	−178(*e*)	− 36	− 33	+ 75	− 33	+171(*e*)	− 12(*e*)	− 29			
III	886	832	+ 73	+ 19	− 20	− 43	+ 22	+ 28	+ 36	− 4	− 40	+ 2	− 89	+ 45	+ 40
IV	979	951	+ 4	− 24	−136(*f*)	− 14	− 68	+ 27	+ 37	—	+196(*f*)	− 18			
60 I	1,022	966	+ 12	− 44	− 16	− 37	+123	− 34	+ 19	− 17	− 16	+ 22	−216	− 86	+107
II	1,029	942	+ 37	− 50	− 22	− 63	+ 60	+ 4	+118	− 27	− 40	+ 20			
III	1,005	859	+ 10	−136	− 15	− 36	+115	− 97	+226	− 57	− 77	+ 77	−428	−313	+259
IV	1,054	945	—	−109	− 51	+ 44	+ 66	− 97	+241	− 55	− 44	+ 5			
61 I	1,050	982	—	− 68	− 23	+ 48	+ 72	− 39	−131	+ 4	+ 75	+ 62			
II	1,021	981	+ 25	− 15	+ 12	− 83	+ 25	+163	−175	− 1	+ 89	− 15			

A plus sign denotes a fall in the reserves and a minus sign a rise.
UK acquired U.S. dollars to the value of £201 million from the International Monetary Fund (I.M.F.) in exchange for sterling.
UK borrowed £89 million from Export/Import Bank.
UK repurchased from I.M.F. with U.S. dollars, sterling to the value of £71 million.
UK paid to I.M.F. a subscription of £232 million (£174 million in sterling and £58 million in gold).
UK repaid £89 million to Export/Import Bank.

Table 17. U.K. imports and exports and changes in imported stocks

Quarterly averages

	Imports				Exports (exc. re-exports)				Adjusted balance of visible trade (*a*) (*b*)	Terms of trade import/export	Stock changes of mainly imported commodities				
	Value c.i.f.		Volume		Value f.o.b.		Volume				Total	Total	Food and tobacco	Industrial materials	Fuel
	As recorded	Adjusted (*a*)	As recorded	Adjusted (*a*)	As recorded	Adjusted (*a*)	As recorded	Adjusted (*a*)							
	£mn.		*1954 = 100*		*£mn.*		*1954 = 100*		*£mn.*	*1954 = 100*	*Current prices*	*1954 prices, £mn. c.i.f.*			
50	645	645	89	89	538	538	101	100	− 87	100	−30.3	−33.4	−14.1	−20.1	+ 0.8
51	970	970	100	100	642	642	100	98	−297	113	+32.0	+19.7	+10.4	+ 2.0	+ 7.3
52	864	864	92	92	642	642	94	92	−187	106	+20.8	+20.5	+ 2.1	+13.4	+ 5.0
53	830	830	99	99	639	639	96	94	−165	100	+22.0	+16.9	+ 9.6	+ 3.8	+ 3.5
54	838	838	100	100	662	672	100	100	−142	100	− 5.0	− 5.0	− 2.1	− 5.7	+ 2.8
55	965	965	112	112	719	709	107	104	−227	101	+ 2.0	+ 2.0	− 4.5	+ 1.8	+ 4.7
56	965	974	111	112	786	781	113	111	−157	99	−13.3	−12.1	− 0.6	−10.9	− 0.6
57	1,011	1,003	115	114	824	822	116	114	−149	96	+25.2	+21.9	+ 5.9	+ 8.0	+ 8.0
58	937	936	114	114	794	794	111	110	−108	90	− 1.3	− 1.0	− 0.3	− 1.5	+ 0.8
59	996	997	122	123	833	833	116	114	−131	90	+ 2.9	+ 4.0	− 2.5	− 2.7	+ 9.3
60	1,140	1,140	137	138	889	893	122	121	−212	88	+25.9	+26.8	+ 5.5	+15.9	+ 5.4
59 I	941	965	117	120	792	783	111	108	−152	90	− 7.2	+ 2.5	+13.6	−10.6	− 0.4
II	983	960	123	120	845	829	118	114	− 96	89		−19.1	−33.0	−10.0	+23.9
III	984	996	119	121	790	837	111	116	−130	90	+10.2	+ 8.7	−18.1	+15.1	+11.6
IV	1,082	1,074	130	130	903	881	125	120	−159	91		+23.4	+27.3	− 4.6	+ 0.7
60 I	1,125	1,107	136	134	925	915	127	124	−162	90	+ 1.8	− 2.6	+10.0	−10.9	− 1.7
II	1,141	1,125	140	137	904	885	124	120	−207	88		+11.5	− 9.9	+ 9.8	+11.6
III	1,119	1,155	135	138	818	870	113	119	−246	88	+50.5	+48.2	−15.6	+50.5	+13.3
IV	1,173	1,170	..	140	909	901	125	122	−234	88		+49.8	+37.6	+14.0	− 1.7
61 I	1,157	1,155		143	938	911	128	123	−208	87		+34.5	+ 7.9	+ 13.9	+12.6
II	1,117	1,086		133	934	919	127	123	−127	88		+ *4.1*	− *11.3*	+ *3.9*	+11.5
March	1,197	1,125	..	139	930	902	..	121	−186	87					
April	1,066	1,077		132	956	919		124	−123	88					
May	1,183	1,083	..	133	897	846(*c*)	..	114(*c*)	−198(*c*)	88					
June	1,114	1,101	..	135	949	992(*c*)	..	133(*c*)	− 64(*c*)	88					
July	1,052	1,062	..	130	926	921(*c*)	..	123(*c*)	− 93(*c*)	86					
August	1,177	1,083	..	*133*	916	972	..	*130*	− 66	85					

Adjusted for dock strikes and other statistical disturbances as well as for seasonal movements and for the different number of working days. Exports exclude d-lease silver. (b) Exports and re-exports less imports. (c) Exports not adjusted for dock strike.

Table 18. Volume of U.K. imports, by commodity

Index numbers, 1954 = 100, seasonally adjusted

	Food and beverages	Tobacco	Basic materials					Fuels	Semi-manufactures and manufactures mainly for industrial use				Finished manufactures		
			Total	Textile materials	Wood	Pulp	Ores and scrap	Total	Total	Iron and steel (a)	Non-ferrous metals (a)	Textile manufactures	Total	Machinery	Clothing
Value 1960 £mn	1,441	104	1,063	267	187	122	167	483	906	101	279	136	542	255	60
1950	92	97	97	110	77	72	88	65	86	139	78	121	74	80	100
1951	101	113	102	96	120	87	82	86	111	150	91	152	76	86	60
1952	91	71	90	88	83	73	90	83	97	352	103	71	107	142	40
1953	102	104	101	110	101	82	95	90	86	198	85	65	115	118	50
1954	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1955	107	111	106	98	114	118	112	121	126	363	109	107	122	124	147
1956	109	102	102	100	92	113	114	115	121	379	101	120	136	137	190
1957	114	103	106	101	101	112	126	114	122	215	110	129	152	145	217
1958	120	101	94	89	89	111	94	124	119	139	114	124	166	153	244
1959	119	97	100	103	98	120	91	143	135	136	121	149	201	178	360
1960	121	118	109	92	119	146	134	157	172	311	149	196	287	218	543
1959 I	124	73	97	98	97	119	83	137	121	96	115	130	171	166	290
II	114	120	97	103	100	111	73	147	128	149	121	135	195	182	332
III	115	87	100	105	97	118	98	141	135	134	121	157	213	180	364
IV	119	104	109	107	100	133	110	147	152	163	128	177	227	185	454
1960 I	118	124	108	95	109	144	126	158	163	227	146	181	275	206	512
II	120	110	106	92	123	147	130	150	175	370	154	195	317	223	582
III	120	108	112	95	118	144	144	151	179	400	153	201	279	220	529
IV	124	126	111	86	121	150	133	168	173	247	143	208	277	224	550
1961 I	122	114	114	96	131	160	135	180	180	208	147	215	298	256	661
II	118	113	103	92	112	148	117	156	164	154	141	212	290	265	594

For explanations see page 63.

(a) Unadjusted.

Table 19. Volume of U.K. exports, by commodity and area

Index numbers, 1954 = 100, seasonally adjusted

	By commodity										By area			
				Manufactures										
					Engineering products									
	Food, beverages, tobacco	Basic materials	Fuels	Total	Total	Machinery, etc.	Road vehicles	Other transport equipment	Textiles	Metals and metal goods	Other manufactures	Overseas sterling area	North America	Western Europe	Other countries
Value 1960 £mn	197	126	133	3,001	1,572	994	444	135	261	472	696	1,428	543	1,030	554
1950	93	102	63	104	97	96	107	79	123	110	101	93	104	93	124
1951	95	76	50	105	103	103	99	110	126	92	105	101	99	89	108
1952	91	79	75	96	101	105	94	96	94	92	90	91	95	88	108
1953	93	93	93	96	96	99	79	119	103	101	89	93	111	95	97
1954	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1955	106	115	90	108	108	110	106	103	96	114	113	106	113	106	110
1956	115	119	92	115	118	117	104	158	91	119	120	104	136	114	126
1957	124	122	79	118	122	120	115	145	91	124	123	105	143	114	139
1958	123	122	83	113	121	115	120	152	79	115	120	101	152	106	128
1959	121	145	80	118	122	118	133	122	79	122	131	96	187	116	132
1960	125	132	94	125	129	129	145	97	80	124	145	101	176	129	145
1959 I	107	140	80	111	117	121	117	146	73	113	124	90	168	108	136
II	116	150	77	117	125	109	136	140	80	112	131	96	192	113	128
III	130	149	74	120	121	116	132	110	80	132	134	96	196	119	130
IV	130	143	88	124	127	124	149	93	84	135	137	101	192	123	136
1960 I	131	136	101	128	136	130	160	107	83	130	139	100	207	128	152
II	118	137	87	124	130	126	152	99	80	125	142	102	176	127	143
III	124	130	87	123	126	129	135	92	79	121	148	104	155	127	143
IV	128	127	101	124	126	133	129	88	78	121	150	100	165	133	142
1961 I	130	144	87	130	136	148	131	79	77	127	157	106	153	138	155
II	121	142	88	127	134	140	120	136	72	128	150	98	161	144	147
June												*101*	*164*	*164*	*159*
July												*95*	*155*	*151*	*156*
August												*109*	*175*	*149*	*151*

For explanations, see page 63.

Table 20. World industrial production

Index numbers, 1953 = 100, seasonally adjusted

	World (a) (b)	USA	Canada	EEC	West Germany	France	Italy	Belgium	Netherlands	EFTA (c)	UK	Sweden	Latin America (a)	Japan (a)	USSR
eight(d)	1,000	516	34	167	68	45	27	14	11	123	92	13	40	21	—
50	84	84	83	81	72	89	78	93	88	94	94	95	90	55	69
51	91	90	90	92	85	99	89	106	91	98	98	100	97	77	80
52	93	93	94	94	91	98	91	101	91	95	94	98	98	83	90
53	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
54	101	93	100	110	112	109	109	106	110	108	108	104	107	108	114
55	112	104	110	122	129	117	119	116	118	115	114	111	117	116	128
56	117	109	120	132	139	128	128	123	124	116	114	115	127	144	141
57	121	110	120	140	147	139	138	123	127	119	116	119	137	167	156
58	118	102	119	144	152	145	143	115	127	118	114	122	145	168	172
59	130	116	128	153	162	152	158	119	139	126	122	127	147	208	193
60	137	119	130	171	180	174	182	126	157	134	130	135		261	212
59 I	125	112	125	149	156	151	152	114*	133	119	116	125	142	187	
II	132	120	129	153	159	157	153	118	138	122	119	125	151	201	
III	127	115*	128	156	163	160	157	120	140	126	122	127	147	213	
IV	136	115	131	165	171	169	170	126	144	131	127	132	149	228	
60 I	136	121	133	168	176	168	177	125	153	133	129	133	150	246	
II	139	120	129	171	179	171	181	127	160	134	131	133	157	254	
III	133	119	128	173	179	177	185	127	155	135	131	137	159	264	
IV	139	115	129	177	184	181	186	124*	160	135	130	139		279	
61 I		113	128	181	194	179	193	121*	162	136	130	142		294	} 230
II		119	132		190	182					131			306	
ril		116	131	180	186	180	193	132	165	137	132	139		298	
ay		119	131	180	189	182	195	134	157	137	132	140		307	
ne		121	134		194	183					133	141		314	
ly		123													
gust		125													

(a) Not seasonally adjusted. (b) Excludes the Sino-Soviet Bloc (see page 63) (c) Excludes Switzerland. (d) In world total.
* denotes period affected by major strike.

Table 21. The United States(a)

Quarterly averages, seasonally adjusted (b)

	Gross national product	Consumers' expenditure		Public spending on goods and services		Gross private fixed investment		Value of physical changes in stocks	Net foreign investment	Durable goods		Building and contracting orders	Unemployment (c)	Employment (b)	Consumer prices (b)
		Durable goods	Other goods and services	Federal	Other	Dwellings	Other			Manufacturers' sales	Manufacturers' new orders				
	$ billion, at constant 1954 prices									*$ billion at current prices*			*per cent*	*millions*	*1954 = 100*
50	79.5	8.25	46.2	5.4	5.88	3.88	8.30	1.80	0.05	26.41	30.95	*4.6*	5.0	59.96	89.5
51	85.5	7.30	47.4	9.8	6.03	3.23	8.80	2.43	0.55	31.13	38.03	*5.0*	3.0	61.01	96.7
52	88.4	7.13	49.0	13.3	6.13	3.20	8.75	0.65	0.05	32.81	35.06	*5.3*	2.7	61.04	98.9
53	92.3	8.28	50.5	14.7	6.38	3.40	9.13	0.13	−0.23	37.13	33.10	*5.6*	2.5	61.95	99.7
54	90.8	8.10	51.4	11.9	6.93	3.85	8.78	−0.40	0.25	33.71	30.47	*6.3*	5.0	60.89	100.0
55	98.2	9.90	54.1	10.9	7.43	4.55	9.55	1.53	0.23	39.24	41.56	*7.6*	4.0	62.94	99.7
56	100.2	9.50	56.6	10.4	7.65	4.05	10.28	1.13	0.63	41.42	43.33	7.9	3.8	64.71	101.2
57	102.2	9.63	58.2	10.8	8.05	3.83	10.28	0.40	0.95	42.48	39.26	8.0	4.3	65.01	104.7
58	100.3	8.90	59.5	11.1	8.70	4.05	8.58	−0.55	0.05	37.21	36.43	8.8	6.8	63.97	107.6
59	107.0	10.20	62.2	10.9	9.15	4.85	9.08	1.30	−0.60	43.57	44.81	9.1	5.5	65.58	108.6
60	109.8	10.32	63.9	10.4	9.70	4.51	9.86	0.80	0.39	44.08	42.62	9.1	5.6	66.68	110.2
59 I	105.7	9.83	61.2	11.1	9.20	4.83	8.65	1.70	−0.68	41.81	44.14	9.1	6.0	63.09	107.8
II	108.6	10.40	62.1	11.1	9.20	5.10	9.08	2.53	−0.95	46.45	47.17	9.7	5.1	66.12	108.4
III	106.6	10.30	62.4	10.9	9.25	4.90	9.28	—	−0.43	43.51	44.21	9.1	5.4	67.06	108.9
IV	107.3	10.28	62.9	10.6	9.05	4.58	9.30	0.95	−0.38	42.54	43.59	8.8	5.8	66.06	109.3
60 I	110.1	10.45	63.3	10.5	9.45	4.58	9.53	2.45	−0.03	46.29	43.63	8.4	5.1	64.27	109.4
II	110.6	10.48	64.1	10.5	9.65	4.55	9.95	1.20	0.18	44.94	43.49	8.8	5.1	67.32	109.9
III	109.5	10.05	64.2	10.3	9.80	4.50	10.00	0.15	0.55	43.73	42.87	9.3	5.7	68.24	110.2
IV	109.3	10.30	64.1	10.4	9.90	4.40	9.95	−0.60	0.85	41.38	40.48	10.1	6.5	66.90	110.9
61 I	108.3	9.40	64.9	10.9	10.10	*4.13*	*9.08*	−0.80	0.83	39.85	40.06	9.0	6.8	64.90	111.1
II	*111.4*	9.95	65.5	11.2	10.00	*4.40*	*9.23*	0.73	0.48	43.44	44.03	9.3	6.8	67.06	111.1
lay										43.74	44.40	9.0	6.9	66.80	111.1
ne										44.16	44.55	9.8	6.8	68.70	111.2
ly													6.9	68.50	

(a) The U.S. index of industrial production is shown in table 20. (b) Employment and consumer prices are not seasonally adjusted. (c) Per cent of civilian labour rce.

Table 22. Industrial countries : imports by volume and import and export prices

Index numbers, 1953 = 1

	Volume of imports						Import prices				Export prices				
	U.S.A.	U.K.	OEEC. incl. U.K. From outside	OEEC. incl. U.K. Intra-trade	West Germany	France	U.S.A.	U.K.	West Germany	France	U.S.A.	U.K.	West Germany	France	Japa
1950	92	90	92	85	72	90	88	84	98	87	88	84	78	82	82
1951	91	101	100	92	75	101	111	112	123	114	101	99	98	96	122
1952	96	93	96	90	90	100	105	110	113	111	100	104	103	103	108
1953	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1954	93	101	107	113	123	109	103	99	98	99	99	99	98	94	97
1955	103	113	121	129	152	123	102	102	100	98	100	101	98	95	95
1956	112	112	130	137	171	143	104	104	102	99	103	105	101	100	96
1957	115	116	138	146	192	151	105	106	103	104	107	110	103	102	97
1958	119	116	139	146	205	150	100	98	95	95	106	109	103	98	9
1959	142	124	147	168	247	147	99	97	91	88	107	108	100	90	91
1960	137	140	164	198	294	176	100	98	91	91	108	110	101	94	94
1958 I	115	114	138	141	197	160	102	98	98	96	107	109	104	98	93
II	115	112	137	143	190	163	101	98	96	95	106	109	103	99	91
III	115	115	136	143	208	134	100	97	93	96	105	109	102	98	90
IV	130	122	146	156	227	143	99	98	93	94	106	108	101	96	89
1959 I	134	118	138	148	209	140	98	97	92	87	107	108	101	87	89
II	144	125	147	163	243	151	98	96	90	88	107	108	101	90	90
III	143	121	142	164	252	132	98	97	90	88	107	107	100	90	91
IV	146	132	159	193	284	166	99	99	90	89	107	109	100	92	93
1960 I	142	138	173	190	277	184	100	99	91	90	108	110	100	95	94
II	141	142	171	194	290	179	100	98	92	90	107	110	101	96	94
III	132	136	168	190	285	159	100	97	91	94	108	110	101	94	94
IV	131	142	180	218	324	180	99	98	90	92	108	110	102	93	95
1961 I	127	145			289	191	99	96	91	90	109	111	106	93	94
II		141			317	203		97	92		*111*	111	107		94

Table 23. Industrial countries' exports of manufactures

	Volume							Value, total	Shares					
	Total	U.S.A. (*a*)	U.K.	West Germany	France	Japan	Others (*b*)		U.S.A. (*a*)	U.K.	West Germany	France	Japan	Other (*b*)
	Index numbers, 1953 = 100							$ *bn., quarterly averages*	*Per cent of total value*					
1950	86	86	110	42	98	81	84	5.0	27.3	25.5	7.3	9.9	3.4	26.6
1951	100	103	109	72	118	89	100	7.0	26.6	21.9	10.0	10.0	4.3	27.2
1952	98	102	100	89	95	94	98	6.9	26.2	21.5	12.0	9.2	3.8	27.3
1953	100	100	100	100	100	100	100	6.9	25.9	21.2	13.3	9.0	3.8	26.8
1954	111	106	104	124	110	140	108	7.4	25.2	20.3	14.8	9.0	4.7	26.0
1955	125	115	113	149	123	186	123	8.5	24.5	19.6	15.4	9.3	5.1	26.1
1956	136	128	120	174	114	222	135	9.6	25.3	19.0	16.4	7.8	5.7	25.8
1957	147	135	123	202	128	250	143	10.7	25.4	18.0	17.5	8.0	6.0	25.1
1958	147	122	118	213	139	255	147	10.5	23.3	17.8	18.6	8.6	6.0	25.7
1959	159	118	122	234	170	303	165	11.3	21.2	17.3	19.1	9.2	6.7	26.5
1960	*179*	135	129	267	195	345	*189*	13.1	21.6	16.1	19.4	9.7	6.9	26.4
1958 I	142	123	121	195	134	255	139	10.3	24.2	18.6	17.4	8.5	6.1	25.2
II	145	127	115	210	130	246	146	10.4	24.4	17.5	18.1	8.3	5.8	25.9
III	141	113	116	214	125	239	145	10.1	22.3	18.1	19.6	8.1	5.9	26.0
IV	155	123	120	230	165	279	157	11.1	22.5	17.0	19.1	9.5	6.1	25.8
1959 I	144	115	116	205	149	263	143	10.2	23.1	18.4	18.3	8.7	6.2	25.3
II	159	123	125	230	174	290	161	11.4	21.9	17.8	18.6	9.5	6.4	25.8
III	156	115	117	232	159	305	166	11.1	21.1	16.9	19.5	8.8	6.9	26.8
IV	175	117	130	269	198	352	188	12.7	19.3	16.6	19.9	9.8	7.1	27.4
1960 I	*175*	127	134	254	209	294	*184*	12.8	20.8	17.1	18.9	10.6	6.1	26.5
II	*179*	145	133	257	193	328	*183*	13.2	22.9	16.5	18.5	9.6	6.5	26.0
III	*173*	133	120	260	174	354	*184*	12.5	22.2	15.5	19.4	8.9	7.5	26.5
IV	*190*	136	129	297	203	404	*203*	13.9	20.6	15.2	20.6	9.6	7.5	26.5
1961 I	*182*	134	137	268	200	340	*194*	13.3	21.4	16.8	19.7	9.8	6.3	26.0
II			*137*	*288*	*202*	*354*		*13.9*	*20.9*	*16.2*	*20.4*	*9.7*	*6.5*	*26.3*

(a) Excluding special category. (b) Belgium-Luxembourg, Canada, Italy, Netherlands, Sweden and Switzerland.

Table 24. Merchandise trade of primary producing countries

$ billion, quarterly averages, seasonally adjusted

	Total			Overseas sterling area (excluding oil producers)			Latin America excluding Venezuela			Oil producing countries					
										Sterling			Non-Sterling		
	Exports	Imports	Balance	Exports	Imports (a)	Balance	Exports (a)	Imports	Balance	Exports	Imports (a)	Balance	Exports (a)	Imports	Balance
1948	4.99	5.65	− 0.66	2.05	2.43	− 0.38	1.36	1.35	—	0.12	0.12	—	0.58	0.47	+ 0.11
1949	4.86	5.68	− 0.82	2.04	2.55	− 0.51	1.15	1.15	—	0.14	0.13	+ 0.02	0.65	0.48	+ 0.17
1950	5.57	5.30	+ 0.27	2.24	2.23	+ 0.01	1.41	1.24	+ 0.17	0.19	0.14	+ 0.05	0.72	0.46	+ 0.26
1951	7.06	7.36	− 0.30	2.99	3.20	− 0.21	1.61	1.77	− 0.16	0.26	0.16	+ 0.10	0.83	0.55	+ 0.28
1952	6.18	7.28	− 1.10	2.51	2.97	− 0.46	1.40	1.71	− 0.31	0.29	0.17	+ 0.12	0.77	0.59	+ 0.18
1953	6.30	6.42	− 0.12	2.41	2.51	− 0.10	1.54	1.41	+ 0.14	0.31	0.19	+ 0.12	0.81	0.59	+ 0.22
1954	6.50	6.81	− 0.31	2.41	2.67	− 0.26	1.55	1.60	− 0.05	0.34	0.21	+ 0.13	0.94	0.65	+ 0.29
1955	6.94	7.39	− 0.45	2.61	3.01	− 0.40	1.53	1.62	− 0.09	0.39	0.22	+ 0.16	1.07	0.72	+ 0.35
1956	7.32	7.83	− 0.51	2.73	3.18	− 0.45	1.63	1.67	− 0.04	0.40	0.22	+ 0.18	1.16	0.81	+ 0.35
1957	7.60	8.78	− 1.18	2.85	3.51	− 0.65	1.57	1.87	− 0.30	0.44	0.24	+ 0.20	1.25	1.02	+ 0.23
1958	7.21	8.28	− 1.08	2.54	3.31	− 0.77	1.47	1.73	− 0.26	0.50	0.25	+ 0.24	1.31	0.96	+ 0.35
1959	7.59	8.09	− 0.50	2.88	3.39	− 0.52	1.49	1.59	− 0.10	0.49	0.26	+ 0.23	1.30	0.93	+ 0.37
1960	*7.95*	*8.95*	*− 1.00*	*3.03*	*3.93*	*− 0.90*	*1.54*	*1.78*	*− 0.24*	0.51	0.27	+ 0.24	*1.36*	*0.83*	*+ 0.53*
1958 I	7.30	8.55	− 1.25	2.61	3.43	− 0.82	1.46	1.81	− 0.35	0.49	0.25	+ 0.24	1.29	0.97	+ 0.32
II	6.99	8.27	− 1.28	2.44	3.29	− 0.85	1.46	1.76	− 0.29	0.50	0.25	+ 0.24	1.24	0.96	+ 0.27
III	7.14	8.03	− 0.89	2.57	3.16	− 0.60	1.42	1.71	− 0.29	0.48	0.25	+ 0.23	1.31	0.95	+ 0.37
IV	7.40	8.29	− 0.89	2.56	3.37	− 0.81	1.53	1.66	− 0.13	0.52	0.26	+ 0.27	1.39	0.95	+ 0.44
1959 I	7.26	7.65	− 0.39	2.58	3.16	− 0.59	1.46	1.47	− 0.01	0.49	0.26	+ 0.23	1.39	0.94	+ 0.45
II	7.55	8.11	− 0.55	2.83	3.40	− 0.57	1.53	1.59	− 0.06	0.48	0.26	+ 0.22	1.22	0.93	+ 0.29
III	7.71	8.16	− 0.45	2.98	3.36	− 0.38	1.57	1.68	− 0.11	0.47	0.26	+ 0.21	1.25	0.92	+ 0.33
IV	7.85	8.46	− 0.61	3.12	3.66	− 0.54	1.39	1.61	− 0.22	0.51	0.27	+ 0.24	1.36	0.93	+ 0.43
1960 I	*8.01*	*8.75*	*− 0.74*	*3.09*	*3.75*	*− 0.66*	1.52	1.73	− 0.22	0.50	0.25	+ 0.25	1.36	0.87	+ 0.49
II	*8.20*	*9.10*	*− 0.90*	*3.09*	*3.99*	*− 0.89*	1.63	1.80	− 0.17	0.52	0.27	+ 0.25	1.36	0.87	+ 0.50
III	*7.86*	*8.93*	*− 1.07*	*3.06*	*3.99*	*− 0.94*	1.53	1.75	− 0.22	0.51	0.25	+ 0.25	1.34	0.83	+ 0.52
IV	*7.73*	*9.00*	*− 1.27*	*2.87*	*3.98*	*− 1.11*	*1.47*	*1.82*	*− 0.35*	0.53	0.30	+ 0.23	*1.37*	*0.75*	*+ 0.62*
1961 I				*2.97*	*3.95*	*− 0.98*	*1.50*	*1.83*	*−0.33*						

(a) Unadjusted ; no seasonal pattern.

Table 25. The sterling area countries : Australia and New Zealand

	Australia									New Zealand					
	Factory production(a)	Civil employment	Bank advances (b) (c)	Personal consumption (a) (d)	Private fixed investment (a) (d)	Merchandise trade, $ mn. (b) (d)			Reserves (e)	Bank advances (b) (f)	Retail sales (b) (d)	Merchandise trade, $ mn. (b) (d)			Reserves (e)
						Exports	Imports	Balance				Exports	Imports	Balance	
	1953/4 = 100	'000	£A mn.	£A mn.	£A mn.				$ mn.	£NZ mn.	£NZ mn. at 1957/8 prices				$ mn.
1954	100	2,712	719	702	185	414	467	− 53	1,133	157	110	171	172	− 1	238
1955	109	2,801	807	777	217	437	540	−103	835	183	114	181	200	−19	178
1956	116	2,852	783	828	234	472	491	− 19	953	171	115	194	188	+ 6	200
1957	121	2,868	755	874	237	551	486	+ 65	1,321	165	121	193	208	−15	152
1958	128	2,896	806	933	259	415	510	− 95	1,120	175	122	150	199	−49	187
1959	136	2,948	795	967	268	500	531	− 31	1,226	170	120	205	162	+43	217
1960	148	3,049	879	1,071	315	491	679	−188	843	178	133	211	196	+15	177
1961				1,136	332										
1959 I	..	2,926	803	933	255	463	486	− 23	1,128	166	114	192	148	+44	217
II	..	2,941	785	982	283	487	517	− 30	1,157	166	120	193	160	+33	249
III	..	2,948	791	1,015	292	532	522	+ 10	1,152	169	121	203	157	+46	271
IV	..	2,977	803	1,124	317	520	599	− 79	1,226	162	124	233	182	+51	217
1960 I	138	3,018	824	1,043	304	536	614	− 78	1,226	171	132	244	185	+59	235
II		3,040	856	1,102	347	485	639	−154	1,147	174	131	198	190	+ 8	298
III	154	3,056	907	1,112	362	510	708	−198	950	182	135	223	200	+23	277
IV	163	3,082	927	1,203	367	431	755	−324	843	187	135	181	211	−30	177
1961 I	145	3,079	912	1,098	291	542	718	−176	869	219	142	188	241	−53	161
II				1,130	308	604	602	+ 1	1,234	218					162
March	146	3,070	901						869	219					161
April	135	3,054	883						933	218					149
May		3,040	863						1,190	220					151
June									1,234	218					162
July									1,287	220					145
August									*1,277*						

For footnotes see page 60.

Table 25 (*contd.*). The sterling area countries : India, Pakistan, Burma, Ceylon, Malaya and Ghana

	India						Pakistan		Burma	Ceylon		Malaya		Ghana	
	Industrial production(*b*)	Bank advances (*b*) (*e*)	Merchandise trade, $mn.(*d*)			Reserves (*e*)	Exports (*b*) (*d*)	Reserves (*e*)	Reserves (*e*)	Exports (*b*) (*d*)	Reserves (*e*)	Exports (*b*) (*d*)	Reserves (*e*)	Exports (*b*) (*d*)	Reserves (*e*)
	1951 = 100	bn. rupees	Exports (*b*)	Imports	Balance	$mn.	$mn.	$mn.	$mn.	$mn.	$mn.	$mn.	$mn.	$mn.	$mn.
1954	113	4.90	295	324	− 29	1,782	90	257	124	95	168	133	428	73	515
1955	122	5.43	319	353	− 34	1,791	100	294	92	102	205	194	472	61	532
1956	133	6.54	325	431	−106	1,360	85	313	121	91	221	185	513	56	484
1957	137	7.48	345	561	−216	872	90	257	93	88	183	178	494	57	434
1958	140	7.79	305	461	−156	644	76	210	119	90	172	154	501	66	441
1959	152	8.53	326	494	−168	695	80	298	141	92	132	202	649	72	423
1960	171	10.56	333	531	−198	566	98	313	125	96	89	239	776	73	454
1959 I	147	8.07	282	506	−224	695	56	235	122	82	172	172	532	57	431
II	145	8.25	318	560	−242	652	78	266	142	99	161	191	564	67	449
III	154	8.29	337	446	−109	627	91	281	147	89	149	218	602	99	445
IV	160	8.53	367	462	− 95	695	96	298	141	98	132	227	649	63	423
1960 I	167	8.86	317	494	−177	661	76	318	131	103	131	241	690	61	*408*
II	166	9.36	350	611	−261	578	124	299	160	102	117	252	742	81	411
III	168	10.34	312	548	−236	540	98	288	143	91	97	247	765	93	400
IV	180	10.58	354	472	−118	566	95	313	125	89	89	215	776	59	454
1961 I		10.37	347	500	−153	533	88	336	101	91	91	195	796	61	
II			388	543	−155	486		292	105	100	100		802	*74*	
March		10.37				533		336	101		91		796		
April		10.39				506		329	93		105		805		
May						533		321	101		105		802		
June						486		292	105		100		813		
July						453		280							
August						*534*									

Table 25 (*contd.*). The sterling area countries : Irish Republic, Nigeria, Rhodesia and South Africa

	Irish Republic					Nigeria	Federation of Rhodesia and Nyasaland			Union of South Africa					
	Industrial production(*b*)	Unemployment (*b*)	Bank advances (*e*)	Exports (*b*) (*d*)	Reserves (*e*)	Exports (*b*) (*d*)	Industrial production	Exports (*b*) (*d*)	Reserves (*e*)	Employment (*b*)	Bank advances (*e*)	Merchandise trade. $mn. (*b*) (*d*)			Reserves (*e*)
												Exports	Imports	Balance	
	1953 = 100	'000	£mn.	$mn.	$mn.	$mn.	1959 = 100	$mn.	$mn.	'000	mn. Rands				$mn.
1954	103	62	167	81	364	105	..	102	150	..	480	256	359	−103	416
1955	108	56	192	78	331	93	..	121	178	..	548	265	370	−105	366
1956	105	62	190	76	282	94	..	127	181	..	559	296	381	− 85	372
1957	104	70	195	92	296	89	..	109	213	1,639	649	324	423	− 99	288
1958	106	65	203	92	300	95	..	95	207	1,646	614	281	428	−147	317
1959	*114*	60	233	92	317	114	100	131	221	1,656	632	308	376	− 68	431
1960	*122*	52	256	107	316	115	108	144	195	1.664	755	317	428	−111	244
1959 I	108	62	214	88	316	118	96	114	209	1,654	622	282	353	− 71	330
II	115	60	222	89	288	116	103	133	221	1,653	634	316	374	− 58	338
III	118	61	231	91	299	118	101	132	207	1,655	602	320	371	− 51	382
IV	117	58	233	98	317	106	100	144	221	1,662	632	313	407	− 94	431
1960 I	120	56	240	105	323	106	107	154	216	1,661	681	326	405	− 79	411
II	122	52	247	97	285	134	109	141	203	1,661	717	335	433	− 98	311
III	123	52	252	111	301	118	109	142	200	1,669	741	321	449	−128	273
IV	123	50	256	114	316	104	106	139	195	1,666	755	287	424	−137	244
1961 I	*130*			124	338	105	112	136	206	1,687	757	336	421	− 85	260
II				124	313	*122*		144	229			353	396	− 43	217
March					338		115			1,688	757				260
April					313		105				776				230
May					315		111								216
June					313										217
July					296										*228*
August															*250*

(a) Annual figures are for 12 months ending in June of specified years.
(b) Seasonally adjusted.
(c) Average in period.
(d) Quarterly rates.
(e) At end of period.
(f) The annual figures are the averages of 52 weeks, whereas the quarterly and monthly figures represent the bank advances at the last Wednesday of the period.

Table 26. Merchandise trade of industrial countries

$ billion, quarterly averages, seasonally adjusted

	Total			USA			Canada			EFTA			UK		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
48	8.02	8.61	− 0.59	3.13	1.77	+ 1.36	0.76	0.66	+ 0.11	2.47	3.25	− 0.78	1.66	2.09	− 0.43
49	8.34	8.56	− 0.22	2.98	1.65	+ 1.33	0.68	0.62	+ 0.05	2.55	3.23	− 0.68	1.71	2.11	− 0.40
50	8.27	9.14	− 0.87	2.53	2.19	+ 0.35	0.73	0.73	—	2.47	2.95	− 0.48	1.58	1.82	− 0.24
51	11.63	12.52	− 0.89	3.72	2.70	+ 1.02	0.94	0.97	− 0.03	3.15	4.23	− 1.08	1.90	2.73	− 0.83
52	11.80	12.22	− 0.42	3.76	2.68	+ 1.07	1.11	1.03	+ 0.08	3.11	3.88	− 0.76	1.91	2.44	− 0.52
53	11.95	12.20	− 0.24	3.90	2.69	+ 1.21	1.06	1.11	− 0.05	3.09	3.73	− 0.64	1.88	2.34	− 0.46
54	12.38	12.59	− 0.21	3.74	2.56	+ 1.18	1.01	1.05	− 0.04	3.25	3.93	− 0.68	1.94	2.36	− 0.42
55	13.57	14.25	− 0.68	3.85	2.83	+ 1.01	1.10	1.19	− 0.09	3.54	4.48	− 0.93	2.12	2.72	− 0.60
56	15.54	16.03	− 0.49	4.71	3.12	+ 1.58	1.24	1.45	− 0.22	3.92	4.70	− 0.77	2.32	2.72	− 0.40
57	16.94	17.34	− 0.40	5.16	3.23	+ 1.93	1.29	1.47	− 0.18	4.16	5.02	− 0.86	2.42	2.85	− 0.43
58	16.16	16.07	+ 0.09	4.42	3.18	+ 1.24	1.27	1.34	− 0.07	4.06	4.71	− 0.65	2.35	2.65	− 0.30
59	17.14	17.57	− 0.42	4.34	3.75	+ 0.60	1.36	1.47	− 0.11	4.25	5.00	− 0.75	2.42	2.79	− 0.37
60	19.55	19.77	− 0.22	5.08	3.66	+ 1.41	1.39	1.42	− 0.03	4.63	5.78	− 1.15	2.57	3.19	− 0.61
58 I	16.22	16.13	+ 0.09	4.50	3.12	+ 1.38	1.24	1.33	− 0.08	4.05	4.66	− 0.61	2.35	2.59	− 0.23
II	15.75	15.75	—	4.34	3.15	+ 1.19	1.20	1.33	− 0.13	3.90	4.51	− 0.61	2.20	2.50	− 0.29
III	16.15	16.05	+ 0.10	4.39	3.18	+ 1.21	1.26	1.29	− 0.04	4.09	4.79	− 0.70	2.39	2.70	− 0.31
IV	16.57	16.53	+ 0.04	4.62	3.40	+ 1.21	1.30	1.42	− 0.12	4.09	4.82	− 0.74	2.33	2.72	− 0.38
59 I	16.07	16.52	− 0.45	4.20	3.50	+ 0.70	1.23	1.42	− 0.19	4.06	4.74	− 0.68	2.28	2.70	− 0.42
II	16.75	17.30	− 0.55	4.17	3.79	+ 0.38	1.37	1.49	− 0.13	4.20	4.85	− 0.65	2.42	2.70	− 0.28
III	17.37	17.77	− 0.40	4.42	3.83	+ 0.59	1.36	1.48	− 0.13	4.25	5.03	− 0.78	2.43	2.80	− 0.37
IV	18.23	18.63	− 0.40	4.53	3.83	+ 0.69	1.48	1.51	− 0.02	4.49	5.40	− 0.91	2.56	3.03	− 0.47
60 I	19.57	19.75	− 0.18	4.98	3.82	+ 1.16	1.48	1.49	—	4.68	5.63	− 0.95	2.65	3.13	− 0.48
II	19.26	19.56	− 0.30	5.05	3.82	+ 1.23	1.30	1.41	− 0.11	4.59	5.68	− 1.09	2.57	3.17	− 0.60
III	19.43	19.82	− 0.39	5.07	3.64	+ 1.42	1.41	1.34	+ 0.07	4.57	5.83	− 1.25	2.53	3.25	− 0.71
IV	20.10	19.96	+ 0.15	5.15	3.38	+ 1.78	1.42	1.45	− 0.03	4.71	6.03	− 1.31	2.57	3.31	− 0.74
61 I	20.42	20.20	+ 0.22	5.29	3.36	+1.93	1.40	1.41	− 0.01	4.87	5.97	− 1.11	2.69	3.24	− 0.55
II	20.28	*20.35*	*− 0.07*	4.86	3.44	+1.42	*1.40*	1.35	*+ 0.05*	*4.81*	*5.79*	*− 0.98*	2.69	3.05	− 0.36

	EEC			West Germany			France			Italy			Japan		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
48	1.60	2.59	− 0.99	0.16	0.39	− 0.23	0.50	0.86	− 0.36	0.27	0.38	− 0.11	0.06	0.17	− 0.11
49	2.00	2.66	− 0.66	0.28	0.56	− 0.28	0.68	0.82	− 0.14	0.28	0.37	− 0.10	0.13	0.23	− 0.10
50	2.32	2.81	− 0.48	0.49	0.67	− 0.18	0.77	0.77	—	0.30	0.37	− 0.07	0.20	0.24	− 0.04
51	3.48	3.83	− 0.35	0.87	0.88	− 0.01	1.06	1.15	− 0.10	0.41	0.54	− 0.13	0.34	0.51	− 0.18
52	3.50	3.84	− 0.34	1.01	0.96	+ 0.05	1.01	1.14	− 0.13	0.35	0.58	− 0.23	0.32	0.52	− 0.20
53	3.58	3.78	− 0.20	1.11	0.95	+ 0.16	1.00	1.04	− 0.04	0.37	0.60	− 0.23	0.32	0.60	− 0.28
54	3.97	4.18	− 0.20	1.31	1.14	+ 0.17	1.08	1.09	− 0.01	0.41	0.60	− 0.19	0.41	0.60	− 0.19
55	4.57	4.82	− 0.25	1.54	1.46	+ 0.08	1.21	1.18	+ 0.03	0.46	0.68	− 0.21	0.50	0.62	− 0.11
56	5.05	5.62	− 0.57	1.84	1.67	+ 0.17	1.16	1.41	− 0.26	0.54	0.79	− 0.25	0.62	0.81	− 0.18
57	5.62	6.21	− 0.59	2.14	1.88	+ 0.26	1.27	1.54	− 0.27	0.64	0.91	− 0.27	0.71	1.07	− 0.36
58	5.68	5.74	− 0.05	2.20	1.85	+ 0.35	1.28	1.40	− 0.12	0.63	0.79	− 0.16	0.72	0.76	− 0.04
59	6.31	6.05	+ 0.26	2.45	2.09	+ 0.36	1.40	1.27	+ 0.13	0.73	0.84	− 0.11	0.86	0.90	− 0.04
60	7.43	7.40	+ 0.03	2.86	2.54	+ 0.32	1.72	1.57	+ 0.14	0.92	1.19	− 0.27	1.01	1.12	− 0.11
58 I	5.68	5.89	− 0.21	2.18	1.91	+ 0.28	1.29	1.43	− 0.13	0.63	0.82	− 0.19	0.74	0.80	− 0.06
II	5.60	5.71	− 0.10	2.19	1.80	+ 0.39	1.23	1.43	− 0.20	0.66	0.80	− 0.14	0.70	0.71	− 0.01
III	5.71	5.68	+ 0.03	2.24	1.84	+ 0.40	1.27	1.37	− 0.10	0.63	0.80	− 0.16	0.70	0.77	− 0.07
IV	5.82	5.77	+ 0.05	2.24	1.90	+ 0.34	1.35	1.35	—	0.63	0.78	− 0.15	0.74	0.75	− 0.01
59 I	5.82	5.71	+ 0.11	2.32	1.93	+ 0.39	1.22	1.21	+ 0.02	0.66	0.79	− 0.13	0.76	0.79	− 0.03
II	6.17	5.90	+ 0.28	2.39	2.07	+ 0.32	1.42	1.22	+ 0.20	0.66	0.82	− 0.15	0.84	0.87	− 0.03
III	6.45	6.09	+ 0.37	2.47	2.14	+ 0.33	1.47	1.22	+ 0.25	0.77	0.87	− 0.09	0.90	0.94	− 0.05
IV	6.76	6.49	+ 0.28	2.62	2.22	+ 0.40	1.52	1.45	+ 0.07	0.79	0.88	− 0.08	0.96	1.00	− 0.04
60 I	7.50	7.29	+ 0.21	2.86	2.44	+ 0.41	1.83	1.58	+ 0.24	0.88	1.18	− 0.29	0.92	1.13	− 0.20
II	7.33	7.24	+ 0.09	2.78	2.59	+ 0.19	1.65	1.45	+ 0.20	0.94	1.14	− 0.20	0.99	1.02	− 0.03
III	7.32	7.46	− 0.15	2.76	2.48	+ 0.27	1.72	1.61	+ 0.11	0.92	1.24	− 0.31	1.06	1.18	− 0.12
IV	7.74	7.58	+ 0.16	2.98	2.61	+ 0.37	1.87	1.63	+ 0.24	0.92	1.21	− 0.29	1.08	1.17	− 0.09
61 I	7.88	7.81	+ 0.07	3.14	2.56	+ 0.59	1.77	1.61	+ 0.16	0.97	1.30	− 0.33	0.99	1.30	− 0.31
II	8.16	8.08	+ 0.08	3.23	2.80	+ 0.43	1.83	1.65	+0.18	1.03	1.31	− 0.28	1.05	1.34	− 0.30

Table 27. Commodity prices

	NIESR price index numbers (*a*)										Commodity prices										
	Current U.K. import prices				Exports, primary producers	Exports, overseas sterling area	Exports, Latin America	Agricultural exports of primary producers			Wheat	Sugar	Tea	Coffee	Cocoa	Rubber	Cotton	Wool		Copper	Softwood
	Total	Food, tobacco	Industrial materials	Fuels				Total	Food	Non-food	Can. $ per 60 lb.	U.S. cents per lb.	Indian rupees per lb.	U.S. cents per lb.	U.S. cents per lb.	d. per lb.	U.S. cents per lb.	Merino d. per lb.	Cross-bred d. per lb.	£ per ton	Index
	1957 = 100										*Average of daily or weekly prices*										*1954 = 100*
1950	..	..	..	..	..	..	..	..	..	..	2.13	4.96	2.30	50.5	32.2	33.3	37.0	164	91	179	66
1951	..	..	..	..	..	..	..	..	..	..	2.33	5.68	2.24	54.2	35.6	50.8	42.3	199	126	220	99
1952	..	..	..	..	..	..	..	..	..	..	2.16	4.16	1.64	54.0	35.6	28.4	39.7	126	64	259	109
1953	..	..	..	..	..	..	..	..	..	..	1.86	3.41	2.00	57.9	37.3	19.9	33.8	147	75	254	99
1954	..	..	..	..	..	..	..	..	..	..	1.73	3.26	3.18	78.7	58.2	20.2	35.1	128	77	249	100
1955	..	..	..	..	..	..	..	..	..	..	1.74	3.24	3.05	57.1	37.3	33.6	34.6	107	75	351	109
1956(*b*)	104.0	106.4	104.8	96.1	103.9	103.4	104.5	101.5	101.4	101.7	1.73	3.46	2.56	58.1	27.3	28.1	35.5	113	75	329	110
1957	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1.64	5.15	2.54	56.7	30.5	26.1	35.4	125	83	220	110
1958	94.9	100.4	91.0	91.8	91.2	92.5	89.2	90.4	95.0	83.1	1.63	3.50	2.57	48.6	44.4	23.5	36.2	89	59	197	102
1959 I	94.5	101.9	90.3	87.4	88.9	91.4	83.8	86.5	90.7	79.7	1.68	3.14	2.12	39.5	37.7	25.5	35.7	76	58	238	95
II	94.7	100.0	93.7	84.6	92.6	96.6	85.6	91.2	91.6	90.8	1.68	2.88	2.18	37.0	37.6	28.5	36.1	93	67	235	95
III	96.0	102.8	94.4	83.8	93.2	97.2	86.9	92.1	90.5	94.5	1.66	2.86	2.73	36.3	37.3	31.1	33.6	98	71	228	95
IV	98.0	104.2	97.9	83.6	94.6	99.1	86.3	93.1	90.4	97.3	1.65	3.01	2.54	36.0	34.1	35.2	32.9	96	74	249	97
1960 I	97.9	102.7	99.0	83.1	95.5	99.0	86.7	93.5	90.5	98.4	1.66	3.01	2.33	36.7	28.6	34.6	33.3	93	73	259	102
II	96.5	99.1	99.7	82.3	95.5	99.7	86.4	93.1	88.2	101.1	1.68	3.02	2.24	37.4	28.1	37.6	34.2	95	74	254	105
III	96.5	102.3	96.9	81.7	93.3	96.5	86.9	89.8	88.1	92.7	1.66	3.27	2.96	36.4	28.5	30.0	33.0	84	67	245	107
IV	94.3	99.2	94.8	81.0	90.6	95.1	82.9	86.0	84.4	88.4	1.65	3.25	2.62	36.4	27.7	26.5	32.3	83	67	226	107
1961 I	93.5	96.5	95.7	81.1	89.8	94.8	82.1	84.9	83.5	87.1	1.67	3.23	2.45	37.1	21.9	24.8	32.7	85	68	223	107
April	94.1	97.5	96.2	80.3	91.3	95.8	83.5	86.6	84.4	90.2	1.67	3.40	2.37	37.0	22.7	26.2	33.7	93	71	229	107
May	94.4	98.0	96.8	79.9	92.1	96.3	85.1	86.8	84.1	91.1	1.67	3.77	2.93	37.2	22.1	26.2	34.1	96	74	242	107
June	93.2	96.2	95.6	79.9	89.2	93.4	83.6	85.0	82.8	88.5	1.67	3.43	2.61	37.7	21.9	24.8	34.5	95	71	236	108
July	92.7	94.6	96.0	79.9	89.0	94.2	83 0	85.0	82.0	89.9	1.79	3.29	2.99	37.2	22.0	24 8	34.8	93	66	229	108
August	92.1	93.4	95.7	79.9	88.7	92.5	84.7	84.4	80.9	89.9	1.83	3.14	2.66	36.2	21.0	25.1	*34.8*	*94*	*66*	*229*	*108*

(a) See *National Institute Economic Review*, No. 1, page 32, and No. 5, pages 69-70. (b) For NIESR price index numbers the figures refer to the second half of 1956.

Table 28. Gold and foreign exchange reserves

$ billion at end of period

	Industrial countries													Primary producing countries					Total official holdings		
	Total	USA	Canada	EEC	West Germany	France	Italy	Netherlands	Belgium	EFTA	UK	Switzerland	Japan	Total	Sterling area countries	Oil producers	Latin America (*a*)	Other	Gold	Dollar	Sterling
1954	36.79	21.79	1.95	6.09	2.00	1.26	0.93	1.04	0.87	6.22	2.76	1.67	0.74	12.00	5.71	0.89	2.68	2.72	34.97	6.98	7.62
1955	37.64	21.75	1.91	7.50	2.40	1.91	1.17	1.05	0.96	5.71	2.12	1.74	0.77	12.08	5.40	1.02	2.71	2.94	35.44	7.29	7.57
1956	38.52	22.06	1.94	7.71	3.40	1.18	1.24	0.93	0.97	5.87	2.13	1.81	0.94	12.58	5.14	1.53	2.80	3.12	36.09	8.27	7.39
1957	39.46	22.86	1.84	8.04	4.10	0.65	1.35	0.93	1.00	6.20	2.27	1.88	0.52	11.92	4.73	1.95	2.38	2.86	37.36	7.92	7.02
1958	41.33	20.58	1.95	10.44	4.60	1.05	2.08	1.37	1.34	7.50	3.07	2.06	0.86	10.96	4.36	1.59	2.07	2.95	38.07	8.66	6.69
1959 I	41.27	20.49	1.90	10.31	4.10	1.25	2.25	1.40	1.30	7.60	3.14	2.05	0.97	*11.16*	4.55	1.60	2.16	*2.86*	38.30	8.62	6.68
II	41.46	19.75	1.94	11.00	4.14	1.63	2.52	1.35	1.36	7.66	3.17	2.03	1.10	*11.24*	4.64	1.53	2.21	*2.85*	37.91	8.97	6.64
III	43.77	19.58	1.95	13.23	3.98	1.86	2.91	1.36	1.33	7.80	3.28	2.00	1.21	*11.34*	4.74	1.37	2.27	*2.95*	37.93	9.23	6.73
IV	41.73	19.51	1.88	11.77	4.53	1.72	2.95	1.34	1.22	7.26	2.74	2.06	1.32	11.56	4.93	1.21	2.32	3.10	37.87	9.15	6.97
1960 I	41.75	19.46	1.86	12.05	4.68	1.85	2.83	1.39	1.29	7.02	2.78	1.87	1.36	*11.72*	*4.91*	1.17	2.47	3.17	37.84	9.00	6.97
II	43.02	19.36	1.78	13.23	5.54	1.99	2.90	1.46	1.35	7.20	2.89	1.90	1.45	11.73	4.72	1.07	2.60	3.34	38.11	9.60	7.11
III	44.19	18.73	1.82	14.30	6.34	2.11	3.08	1.55	1.22	7.68	3.11	2.11	1.66	11.30	4.40	1.02	2.53	3.35	38.15	10.09	7.15
IV	44.57	17.80	1.84	15.05	6.74	2.07	3.08	1.74	1.42	8.06	3.23	2.32	1.82	11.00	4.26	1.00	2.40	3.34	38.05	10.32	7.08
1961 I	44.92	17.43	1.94	15.53	7.08	2.40	2.94	1.67	1.44	8.02	3.02	2.54	2.00	*11.10*	*4.27*	1.21	*2.31*	*3.31*	38.06	10.31	7.16
April	44.53	17.43	1.94	15.19	6.69	2.47	2.95	1.66	1.42	7.92	2.95	2.53	2.04	*10.95*	*4.25*	*1.13*	*2.31*	*3.26*		9.89	
May	44.73	17.45	1.96	15.40	6.70	2.61	3.00	1.65	1.44	7.95	2.90	2.55	1.97		*4.50*	*1.10*	*2.28*			9.92	
June	45.30	17.60	1.99	15.90	6.85	2.78	3.11	1.70	1.47	7.89	2.77	2.60	1.91		*4.53*	*1.05*				10.06	
July		17.59	1.97			2.96	3.23	1.75	1.54	7.65	2.45	2.66	1.84								
August		*17.65*				2.81		*1.69*			3.49	*2.73*	1.72								

(a) Excluding Venezuela For explanations see page 63.

NOTES ON STATISTICAL APPENDIX

GENERAL NOTES

Country groups

The following country groups are used ; they include all the countries listed against them, unless stated otherwise.

Industrial countries : USA, Canada, EEC, EFTA and Japan.

North America : USA and dependencies, and Canada.

EEC : Belgium-Luxemburg, France, West Germany, Italy, Netherlands.

EFTA : Austria, Denmark, Norway, Portugal, Sweden, Switzerland and U.K.

Continental OEEC : EEC, EFTA, (excluding UK), Greece, Spain and Turkey.

Western Europe : Continental OEEC, Yugoslavia and Finland.

Primary producing countries : All countries not included as industrial countries above, except for the Sino-Soviet Bloc, Finland, Greece, Spain, Turkey and Yugoslavia.

Overseas sterling area : The British Commonwealth (except Canada), British Trust Territories, British Protectorates and Protected States, Burma, Irish Republic, Iceland, Jordan, Libya, Muscat and Oman.

Latin America : Central America, including Mexico but excluding the Panama Canal zone, and South American countries excluding European possessions.

Oil-producing countries, sterling : British-protected Persian Gulf States, Kuwait, Aden, Sarawak, Brunei and Trinidad.

Oil-producing countries, non-sterling : Iraq, Iran, Saudi Arabia, Venezuela and the Netherlands Antilles.

Other primary producing countries : All primary producing countries not included elsewhere.

Sino-Soviet Bloc : Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, North Korea, North Vietnam, Poland, Roumania, Union of Soviet Socialist Republics, and the People's Republic of China.

Valuation of imports and exports

Imports are valued c.i.f. and exports and re-exports f.o.b. unless otherwise stated.

Seasonal adjustments

A number of monthly and quarterly series have been adjusted to eliminate the estimated normal seasonal variations. The procedures used and the reliability of the adjustments were described in the article 'Seasonal corrections' in the September 1959 issue of the Review (No. 5), on pages 50-56 and on pages 42-43 of the May 1961 issue. A complete set of seasonal adjustments used may be obtained on request. The adjusted data in the tables refer to standard quarters. The main point to be noted is that all seasonally adjusted series must be regarded as containing a margin of uncertainty, depending in particular on the extent to which seasonal variation can be shown to have been regular in the past.

NEW OR REVISED SERIES

(Full definitions and explanations were given in the National Institute Economic Review, number 15, May 1961, page 59-64. The notes on page 66 of the July issue described revisions or new figures. The notes below describe some further revisions.)

Tables 1, 9, 10, 11 and 12

Annual figures have been revised in the light of the new National Income and Expenditure (Blue Book) 1961 ; it is, however, not yet possible to adjust all the quarterly figures accordingly.

Table 18. Volume of U.K. imports by commodity

The newly included column of Clothing corresponds with division D21 (Clothing, footwear, travel goods, handbags and similar containers) of the Trade and Navigation Accounts.

Table 19. Volume of UK exports, by commodity and area

The commodity grouping has been changed to match the seasonally adjusted value series now published by the Board of Trade. The new groups correspond with the following classes and divisions used in Trade and Navigation Accounts : Food, beverages and tobacco, A ; Basic materials, B ; Fuels, C ; Manufactures, D ; Engineering products, D 15/19 and 22 ; Machinery and instruments, D 15, 16 and 22 ; Road vehicles, part of D 18 ; Other transport equipment, remainder of D 17/19 ; Metals and metal goods, D 12/14 ; Textiles, D 6/9.

Table 28. Gold and foreign exchange reserves

Primary producing countries

Gold and foreign exchange holdings of the overseas French franc area are now included.

ANNOUNCEMENTS OF INTEREST TO ECONOMISTS

EUROPEAN PERIODICALS ON ECONOMIC TRENDS

In the November issue of the Review it is planned to provide a key list of European periodicals (published by research institutes, banks and government departments) which comment on current economic trends or business conditions, nationally or internationally. With the growing interest, in this country, in economic developments in other European countries it is believed that information as to the contents, source and price of such periodicals, and whether they are available in English, will be useful to many readers of this Review.

VACANCY FOR A RESEARCH OFFICER AT THE INSTITUTE

The National Institute has a vacancy for a Research Officer (salary scale £1,050 x 50 — £1,700, with F.S.S.U. and family allowances). The appointment, which would be for two or three years and open to renewal thereafter, is to join a team studying the long-term prospects of the British economy. Applicants should be able to take up the appointment not later than January 1962 ; and must have a good degree in economics, preferably with statistics. Previous research experience is desirable. Applications, by October 31st, with a curriculum vitae, to the Secretary, NIESR, 2 Dean Trench Street, Smith Square, London, S.W.1.

The National Institute has agreed to publish in the Review selected advertisements and notices of Conferences, awards, vacancies and appointments wanted by economists, and other matters of direct interest to readers. Inquiries should be addressed to The Secretary, NIESR, 2 Dean Trench Street, Smith Square, London, S.W.1.